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STUDENT PERCEPTIONS OF INTERACTION IN AN ONLINE FOREIGN LANGUAGE LEARNING ENVIRONMENT

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STUDENT PERCEPTIONS OF INTERACTION IN AN ONLINE FOREIGN LANGUAGE LEARNING ENVIRONMENT

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Dedication

This dissertation and all the work that has gone into its preparation and completion is dedicated to my lovely and talented wife, Jane. Without her support and encouragement it would not have been completed nor even attempted. As with everything else I do, this is for her.

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STUDENT PERCEPTIONS OF INTERACTION IN AN ONLINE FOREIGN LANGUAGE LEARNING ENVIRONMENT

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A qualitative study of how first year foreign language students perceive different interactions in an online environment. In depth interviews were conducting with ten students after the completion of an online second semester Spanish course. Individual case studies recorded the unique experiences of each study participant and those experiences were then compared and analyzed for common themes. Emerging themes included the value of explanatory feedback programmed into the course, the use of message boards for making interpersonal connections, the difficulty of conducting online chats, the role and value of announcements and the importance of immediacy behaviors for creating social presence. The themes were then applied to the following research questions: 1) What is the effectiveness of the available interactions in a web-based Spanish course as perceived by community college foreign language learners? 2) How do these interactions work together to facilitate learning based upon their purpose? 3) How do these interactions work together to facilitate learning in an online foreign language learning environment based upon with whom or what the student is interacting?

The results of this study included three attributes of effective interaction. The participants indicated a need to make a connection between their personal learning goals and the available interactions. Timeliness was also identified as a key component of effective interactions. Automatic feedback, archives for previous information and a quick turnaround on email correspondence were listed as important aspects that created a feeling of timeliness. The third attribute was identified as a low level of frustration when compared to the potential benefit of an interaction. The study participants indicated a willingness to endure some frustration if they thought it would be worth it in the end. Final recommendations suggested that designers of online foreign language courses should include non-linear instructional activities, carefully designed chat opportunities, quality automatic feedback and reading and listening passages that are level appropriate. Instructors should engage in behaviors that enhance the effectiveness of interactions by making regular announcements, helping learners draw connections between the interactions and their learning goals, maintaining and organizing archives and keeping response times as close to 24 hours as possible.

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1.1 INTRODUCTION

The value of learning a foreign language has now become generally accepted in the United States, having come a long way from a time when language teachers had to justify and fight for their inclusion in the curriculum. Whether based on the "practicality" of Spanish, especially in the Southwest, or the skills and knowledge acquired in learning any second language, most people accept the premise that learning another language is a useful pursuit. An increasingly global economy also offers incentives for learning another language, and modern communications systems make interaction with other cultures and languages both easier and more common. There have been increases in demand for foreign language teachers at the elementary school level since 1990 (Rosenbusch, Kemis, & Moran, 2000). There have also been calls for a greater emphasis on foreign language in fields such as engineering that increasingly depend on international collaboration. The hope is to improve the communication skills of practitioners in these fields (Gilleard & Gilleard, 2002).

Nowhere is this demand more obvious than at large community colleges. In one Southwestern city, a particular multiple campus community college often struggles to find classroom space as well as instructors to fulfill the needs of the Foreign Language Department. Among the wide variety of learners, there are those non-traditional ones who find it difficult to fit these courses into their already challenging schedules laden with concerns such as family and full-time employment. The use of web-based courses is being explored as a possible way to address many of these issues. While online courses have become common and are a rapidly growing area, how online instruction applies to

learning a foreign language, the characteristics of quality online language instruction and the role of interaction in online foreign language learning are still being explored (Don, 2005). Although there have been numerous studies of and theories about interaction, which is a key factor in language learning, its nature in an online environment is not yet fully understood.

1.2 Foreign Language Learning and Second Language Acquisition

Theoretically there is a lot of overlap between Foreign Language Learning (FLL) and Second Language Acquisition (SLA). Hall and Verplaetse (2000), like many researchers, use the terms FLL and SLA together and do not make clear what distinctions there are, if any, between them. Others even use the terms interchangeably as reported by Block (2003). When a distinction is made, it generally refers to the kind of learning environment in which the learner finds him or herself. In the terms of this distinction, FLL is the study of a non-native language within the setting of the native language (Gass & Selinker, 2000) such as English speakers learning German in the U.S. or some other English-speaking country. This would distinguish it from SLA which by the strictest of definitions refers to the study of a non-native language within the environment in which that language is spoken (Gass & Selinker, 2000), such as Japanese speakers learning English in the U.S. With all the common ground between these fields the historical boundaries between them are also blurred. There are however, some unique features that give merit to considering them separately.

1.3 Foreign Language Learning and Interaction

Before exploring the specifics of online interaction in Foreign Language Learning (FLL), it is important to consider what is involved in FLL. It began with the study of "modern" languages (as opposed to what are often referred to as the "dead" and purely

academic languages of Latin and classical Greek) which first brought an emphasis to interaction in the 19th century by giving primacy to listening and speaking skills over reading and writing which were the hallmark of traditional language study. The communicative approach to foreign language education that eventually evolved out of that focus has placed a great emphasis on interaction. In addressing concerns of how to assess communicative competence, Bennett and Slaughter (1983) described interactional proficiencies that language learners demonstrate in negotiating conversation including, for example, initiating new topics, shifting topics, changing formality and relating knowledge to an assumed, shared experience base. These proficiencies certainly play a role in many of the characteristics of a communicative approach. Among those characteristics are an intention to mean, the attempt to bridge an information gap, personalization of message, and unpredictability of discourse (See Grenfell and Harris, 1999, for a more complete description of the communicative approach).

The National Standards in Foreign Language Education Project, undertaken by the American Council on the Teaching of Foreign Languages (ACTFL), in collaboration with other concerned professional organizations, also reflect this focus on communication and interaction with other cultures in the statement of philosophy for the standards.

> Language and communication are the heart of the human experience. The United States must educate students who are equipped linguistically and culturally to communicate successfully in a pluralistic American society and abroad. (*Standards for Foreign Language Learning: Preparing for the 21st Centruy*, 1996)

The study of modern languages and its emphasis on communication has brought with it, the investigation of interaction as well. Hall and Verplaetse (2000) discuss the historical origins of the formal study of interaction in FLL. Many early studies focused on learners' interactions with native speakers and how the latter modified their speech to accommodate novice speakers. While this might seem more the purview of Second

Language Acquisition (SLA) because of the implication that the language is being learned in an environment where that language is spoken, it may have inspired the examination of other kinds of interaction, the focus of which was in the classroom. These other areas include the teachers' use of language in the classroom and how they should interact with learners to support learning as well as the interactions among non-native speakers and their contributions to the learning process (Hall & Verplaetse, 2000).

These areas continue to be researched today with some studies including technology as an enabler of interaction. As technology enters the classroom, questions arise of how it supports the interactions in FLL. Is it more than an enabler of interaction? Do interactions using technology need to be with another individual in order to be useful in language learning? These questions are also asked in the area of SLA because its overlap with FLL.

1.4 Second Language Acquisition and Interaction

The early theories in SLA focused predominantly on the process in which the first language was acquired and applied that to learning a second language. Those theories included the Monitor Model, the Acculturation Model and Conversational Analysis. The Monitor Model sees interaction as a source of "intake" which then is internalized on a subconscious level as language is acquired (Krashen, 1978). The Acculturation Model views interaction as the method through which learners are integrated into a language community (Schumann, 1978). Conversational Analysis suggests that language acquisition is essentially learning how to interact, so discourse analysis can be used to study language learning (Hatch, 1978). While each of the above approaches consider interaction to some extent, Cook (1982) criticized them by applying the tenets of interactional psychology, which draw a connection between interaction and behavior, as being "black-box" models in that you see what goes in and what comes out, but the inner

workings remain hidden. The use of discourse analysis in research, coupled with the view of interaction, as input provided an important foundation for what is known as the Interaction Hypothesis (Mackey, 1999). Its main premise states that learning takes place during conversational interaction as a result of negotiating for meaning (M Long, 1996).

This focus on interaction has also been expanded on by Gass (1997), Pica (1998) and Breen (2001), among others, who have all made notable contributions in exploring the role of interaction as the centerpiece of the Input-Interaction-Output (IIO) model of SLA. This model and the theories surrounding it view interaction as a key element of the language learning process helping direct the learners' attention to language elements that do not "match" the target language (Gass & Selinker, 2000). Another trend influenced by the Acculturation Model and studies in sociolinguistics involves a social view that considers interaction as the scaffolding necessary to promote the learner's appropriation of language (Block, 2003). Appropriation is the term applied to the process of making language one's own.

Like other learning oriented disciplines there has been a significant interest in the role of technology, particularly the computer, as it relates to SLA. In fact Chapelle (1997) suggests using SLA research as the framework for research in the field of Computer-assisted Language Learning (CALL). This raises the question of how learners use computers to facilitate useful interaction in support of learning. What role do they have in the negotiation of meaning? What scaffolding can they provide to assist in language learning? These are some questions that have guided and continue to guide research in the field of CALL.

1.5 Computer-assisted Language Learning and Interaction

FLL and SLA both have had a great deal of influence in the field of Computer-assisted Language Learning (CALL). Beatty defines CALL as "any process in which a

learner uses a computer, and, as a result, improves his or her language" (2003, 7). The early applications of CALL, sometimes referred to as Foreign Language Computer-assisted Instruction (FL CAI), were very much machine-controlled, often taking the form of tutorials accompanied by "drill and practice" but have come to be more learner-driven (Garret, 1987).

This move toward a greater focus on the learner can also be seen in how CALL research has seen a shift of focus away from merely describing CALL programs to investigating how to use those programs to aid learning (Liu, Moore, Graham, & Shinwoong, 2003). Likewise, investigations up through the late 1980's into potential differences between CALL and non-CALL treatments have given way to the question of how to use CALL. Perhaps the large number of findings of no significant differences as reported by two surveys of CALL research (Chapelle & Jamieson, 1991; Pederson, 1987) contributed to the change in focus as well. A meta-analysis of research from 1990-2000 (Liu et al., 2003) reported that most research-based studies during that time investigated the effect of computer tools on specific language skills, acknowledging that most educators have accepted "that the effective use of technology can influence student learning" (262).

Weible (1987) described CALL as possessing three distinct characteristics: structured interaction, process orientation and automated individualized instruction. Structured interaction refers to the fact that the program sets the limits and boundaries of the learner's interaction with the subject matter. Process orientation suggests the computer has the ability to simulate and show a linguistic process thus avoiding troublesome grammar terms. Automated individual instruction references a program's ability to recognize needs of individual learners and adapt accordingly.

It is this third feature that perhaps most resembles interaction as both the learner and the software are responding to each other and has resulted in two related fields: Intelligent Computer-assisted Language Learning (ICALL) and Intelligent Tutoring Systems (ITS), which can apply to language learning as well as other fields. These are striving to create a responsive and flexible system that can interact with and adapt to the learner and provide individualized instruction (Lesgold, 1988). SLA theories and the communicative approach to FLL have guided ICALL development and research in the direction of virtual worlds and animated scenarios where learners use the target language to interact (Holland, Kaplan, & Sams, 1995). Current research also includes elements of Computer-Based Adaptive Testing and task-based learning in order to provide learners with level appropriate interaction (eg. Gonçalves, Aluisi, de Oliveira, & Oliveira Jr., 2004).

Around the same time that some researchers and developers were exploring the possibilities of ICALL and ITS, others began to investigate the potential of networked-based platforms including the Internet (Levy, 1997). Networked-based Language Teaching (NBLT) as it is called relies upon Computer Mediated Communication (CMC). CMC uses computer networks as a medium for communication and learning to facilitate the "transfer, storage and retrieval of information" (Santoro, 1995, 11). These include all the different tools available through the Internet, such as email, listservs, message boards, Internet relay chat (IRC), and audio and/or video conferencing. Kötter (2001) categorized the most important roles of CMC as providing more opportunities for participation, facilitating quicker feedback and information storage and retrieval, providing learners more time to reflect on language use and benefitting less active participants as well as the active ones. These conclusions are similar to the results of a meta-analysis of CALL literature in which Zhao (2003) identified three functions of technology in FLL:

providing access to linguistic and cultural materials, providing communication opportunities and providing feedback. These can be seen as interactions with content, with other learners or with native speakers and content experts. These issues of access, opportunity and feedback, as well as the role and nature of online interaction, are also relevant to the field of Distance Learning (DL).

1.6 DISTANCE LEARNING AND ONLINE INTERACTION

Distance Learning (DL) has evolved from the early correspondence courses and radio broadcasts to web-based courses. There have been a number of studies related to the role of interaction in DL environments. A good share of these investigations, including the work of Moore (1993a, 1993b), Hillman, Willis and Gunawardena (1994), Chen (2001), Hirumi (2002), Jung (2002) and Gibby (2003), have explored the effects of types and levels of interaction on the psychological "distance" that learners perceive (known as transactional distance). White (2003) discusses the role of interaction in contributing to learner satisfaction with a DL course citing Fulford and Zhang's study (1993) that indicated high satisfaction when high levels of interaction were possible whether or not the learner actually took advantage of the opportunities.

Another factor recently studied in relationship to DL and online interaction is that of individual learning styles or preferences. While this topic has a solid body of research in cognitive sciences dating back into the early 1980's, some are now looking at how they might affect online communication behavior. Fahy and Ally (2005) studied the online interactions of 40 graduate students and found that learning preference did not affect the overall level of student online participation in the course. While student preference may not directly impact overall participation levels, even in highly structured online courses, the learners can pick and choose how and to what extent they will interact with the various elements of the course. While instructors might control the course in the sense of

assigning and weighting grades, learners still ultimately make interaction decisions, and external motivators, such as points and grades, comprise only one factor of many in those decisions.

The use of online learning in all aspects of higher education, including community colleges, has demonstrated rapid growth in the past ten years. Online learning has been viewed as a possible remedy for the demands on classroom space as well as way to meet the needs of non-traditional students with scheduling concerns. Courses that are entirely web-based provide greater opportunity to a wider population. Some express reservations about the effectiveness and quality of online courses and are concerned with the content, structure of and the quality of interaction offered by these kinds of courses. Among the questions raised are: What types of online interaction promote learning? What kinds of online interaction appeal to learners? What encourages learners to interact with computers in ways that facilitate learning? These questions regarding online interaction in DL apply to other fields as well and are particularly relevant to FLL, SLA and CALL.

1.7 THE ROLE AND NATURE OF ONLINE INTERACTION IN A FOREIGN LANGUAGE COURSE

In the setting of a community college with a high demand for foreign language courses where online learning is viewed as a possible way to better serve its student population, it is important to understand the role and nature of interaction. Research in FLL and SLA both point to its importance in language learning. If foreign language classes are to be successfully taught in an online environment, it is important to understand how interaction may be best employed to support language learning.

Whether interaction is a tool, a methodology or something inseparable from the learning process, the question of how foreign language students interact online in order to learn and what factors contribute to their choice of interactions remains largely

unanswered. Perhaps this is because much of the relevant literature on online interaction has been concerned with and done from the perspective of design issues rather than from the perspective of learners. Liu et al. (2003) reviewed 246 articles published during the 1990's and 176 of those were project descriptions, skill-specific software reviews, design concerns or computerized testing issues. Relatively few studies have focused on learner interactions and perspectives. How language learners interact online and the role of that interaction in the learning process continues to be a concern of researchers as expressed in the following quotes.

> L2 classroom research suggests the need for descriptive research documenting the nature of the interaction that learners engage in within various CALL contexts. In other words, it is essential for CALL research to observe learners' linguistic and non-linguistic interactions in order to understand the nature of the task. (Chapelle, 1997)

> CMC has made it possible for language learners to integrate independent learning experiences with opportunities for interaction and collaboration. The crucial question now is how to arouse and maintain in distance language learners a desire to interact online. (Kötter, 2001, 55)

More recently, Garrison and Clevenland-Innes (2005) reiterated the need to better understand online interaction because there are other factors such as structure and leadership that guide and adapt the nature of these interactions.

> We need to have a qualitatively richer view of interaction. There is a strong need to study the qualitative nature of online interaction in terms of teaching and learning approaches… Further study is very much needed to understand the nature of online interaction that will support high levels of learning. (145)

A qualitative methodology such as they suggested would be well suited to also address Chappelle's "need for descriptive research" of the interactions in various CALL settings as well as Kötter's question of "how to arouse and maintain… a desire to interact" in an online environment. Data collected through interviews and written documents such as transcribed chats, reflections and message postings was analyzed

using a grounded theory approach to draw patterns of behavior and potential explanations. The specific questions investigated in this research were:

1. What is the effectiveness of the available interactions in a web-based Spanish course as perceived by community college foreign language learners?
    - Which of these online interactions do students perceive as most beneficial to learning a foreign language and which ones do they perceive as least effective? Why?
    - To what extent do the students participate in the interactions linked to their grades?
    - To what extent do the students participate in optional interactions not related to their grades?
2. How do the different interactions work together to facilitate learning in an online foreign language learning environment based upon their purpose?
    - What do community college students perceive is the role of the interactions suggested by FLL research (about the language, about the message and about the tasks) in online foreign language learning?
    - What do community college students perceive is the role of the interactions suggested by SLA research (a source of input, a way to test internalized language rules and a method of integration into a community) in online foreign language learning?
    - What do community college students perceive is the role of the interactions suggested by DL (access to authentic material, opportunity for communication and/or collaboration and access to feedback and support) in online foreign language learning?

- What do community college students perceive is the role of the different modes of interactions along the continuum from one-way direct instruction to two-way synchronous channels as suggested in CALL and DL in online foreign language learning?

3. How do the different interactions work together to facilitate learning in an online foreign language learning environment based upon with whom or what the student is interacting?
   - What do community college students perceive is the role of the interactions suggested by FLL research (teacher-class, teacher-group, teacher-student and student-student) in online foreign language learning?
   - What do community college students perceive is the role of the interactions suggested by SLA research (non-native speaker with native speaker and non-native speaker with non-native speaker) in online foreign language learning?
   - What do community college students perceive is the role of the interactions as suggested by DL (learner-learner, learner-instructor, learner-content and learner-interface) in online foreign language learning?

These three questions provide the opportunity to seek a deeper level of understanding of student perceptions of online interaction and its role in FLL in the context of a community college, web-based Spanish course in a major southwestern city. It should be acknowledged that there are many definitions of the term interaction in the four fields identified as relevant for the review of literature. These questions focus on the "available interactions" in a specific online environment, and for the purposes of this study, interaction is used to refer to the assignments provided to the students, required or

optional, as well as the communication features inherent to the course platform, Blackboard (e.g. email, audio chat, messages boards).

1.8 POSSIBLE BENEFITS

The possible benefits of this study include moving towards a better understanding of the nature of online interaction as perceived by community college foreign language learners that may be tested through further research. The study contributes to the literature in online interaction and, more specifically, helps develop a deeper level of understanding of the nature, type and effectiveness of interaction in online foreign language learning environments as perceived by community college students. It contributes to the knowledge of the role of interaction in online learning as suggested by previous studies (e.g. Grooms, 2003). Additionally, it explores a the context of foreign language learning in an entirely web-based, as many previous studies (e.g. Blake, 2000; Stepp-Greany, 2002) have focused on these tools primarily as supplements to a face-to-face foreign language class.

Liu, Moore, et al. (2003) recommended that future CALL research have a more solid basis in theory and that software development likewise be grounded in sound pedagogical theory. The grounded theory approach of this study provides important insights into the nature, type, level and perceived effectiveness of interaction in online FLL environments that may help contribute to future theory development in online FLL interaction. This study also contributes to developing a better understanding of the experience of foreign language learners in a web-based course.

1.9 LIMITATIONS

It should be understood that the individual experience of different learners may vary widely and establishing causal relationships were not the intended outcome of this

study. Those different experiences, however, are valuable in their own right as the use of online tools in FLL in community colleges is growing rapidly, and having a greater understanding of the perceived effectiveness of different types of interactions by community college students helps in the design of online foreign language courses. While a variety of online interactions were studied, the purpose was not to determine which were more successful in improving learner performance, but rather to foster a deeper level of understanding of community college students' experiences with and perceptions of interaction in an online FLL environment.

Chapter 2: Literature Review

2.1 INTRODUCTION

What are the nature and type of interaction of community college students in an online FLL environment? What is the perceived effectiveness of these different online interactions? To answer these questions it was important to understand interaction on multiple levels. As foreign language classes move into the area of web-based courses, it will be important to understand both the role of interaction as it applies to the discipline and the medium. There is a large body of research in foreign language learning (FLL) and second language acquisition (SLA) that involves interaction as it relates to how non-native languages are learned. A review of literature in these fields will provide a perspective on what is known about interaction as it relates to the discipline. The fields of computer-assisted language learning (CALL) and distance learning (DL) will likewise provide a solid base for understanding interaction in relation to web-based learning environment.

2.2 FOREIGN LANGUAGE LEARNING

It should be clear from the definitions of FLL and SLA that while there is much overlap, one of the major differences lies in FLL's primary reliance on the classroom environment. When discussing the differences between classroom discourse and other situations, Oller (1970) commented that "the difficulty is not to teach second languages, but to teach them in classrooms." While SLA does not ignore the classroom, FLL traditionally is bounded by the classroom because of its nature. When one learns English in Japan, for instance, the classroom is naturally going to be the primary forum for exposure to the target language (TL), while if one were to study English in an English speaking country, the opportunity for learning extends well beyond the classroom walls

and in fact does not even need to enter it. So while the two fields share many characteristics, FLL uses theoretical models about learning in order to develop teaching methodologies, syllabi formats and classroom activities. One body of thought suggests that learning a second language (L2) should be similar to learning one's first language (L1). Practitioners who adhere to this philosophy have been greatly influenced by SLA theory and rely upon it to a great extent when preparing classroom instruction.

When considering the role of interaction in an online foreign language course, it is natural to start inside the classroom walls to build a foundation for the role of interaction in FLL in general. As discussed in chapter 1, due to the major role that the classroom environment plays in FLL, interaction has been viewed as a technique or a tool. Ideas about how that tool should be used vary from theory to theory. What follows is a review of the of those theories in which interaction plays a role.

2.2.1 Linguistics-based Theories

The foundations of one of the early theories are found in the study of the errors made by learners. Contrastive Analysis (CA) emerged from the psychological study of transfer in the field of applied linguistics, influenced by the psychological theory of behaviorism (Johnson, 2001). Johnson uses the example of a German speaker learning English to demonstrate what can be learned from errors. In German for instance, one says, "I have hunger," as opposed to the English "I am hungry." When the German speaker makes the mistake of saying, "I have hunger," in English, it is a demonstration of negative transfer also known as interference. Where there is negative transfer, there is also positive transfer where language structures between two languages are parallel and the transfer of structure from one language to the other is advantageous. In theorizing what made some language features difficult for learners, Lado (1957) suggested what became known as the contrastive analysis hypothesis. It states that the L2 features similar

to the learner's L1 will be easier while divergent features will be more difficult. This led to a large number of comparative studies in order to identify where learners would likely face the greatest difficulties. These comparative studies were among the tasks the Center for Applied Linguistics focused on after its founding in 1959 (Johnson, 2001).

One of the problems with the CA hypothesis was that it only predicted errors similar to the aforementioned Johnson example, but not other errors such as the same German speaker saying "I hungry" which is more like an error made by a child learning English as a native language. That kind of error is not predicted by negative transfer (Johnson, 2001), so the theory was later modified by Wardhaugh (1970) into the weak CA hypothesis, "weak" since it does not claim to predict errors, but merely explain *some* (not even most) of them when they occur. This rollback of CA hypothesis undermined the motivation behind the large comparative language studies, since they hardly seemed worth the effort to merely explain some of the errors (Johnson, 2001).

An effort to expand CA to explain errors outside the realm of negative transfer became known as Error Analysis. Richards (1974) categorized as interlingual those interference errors caused by a learner's inability to separate L1 from the language being studied. Errors caused by a lack of competence at a particular stage of learning he called intralingual or developmental. Intralingual error types include over-generalization of a rule, ignorance of an exception or restriction to a rule, incomplete application of a rule and false hypothesized concepts. The focus on these non-interference type errors led to the development of an alternative to CA, Creative Construction Theory. Heavily influenced by Chomsky's ideas of a Language Acquisition Device, Dulay and Burt (Dulay & Burt, 1973) based this new theory more on developmental errors that the learner creates as part of the learning process. These are similar to mistakes made by children learning L1 and studied the order in which the basic English morphemes were

acquired. While this theory and line of research could very easily fall under the umbrella of SLA, it clearly had implications for FLL. These studies investigated questions about how to teach foreign languages. Do individual learners have their own "internal syllabus" determining the order in which they learn language features? Is there a universal order common to all FL learners that should be followed? Should the FL classroom be modeled after an L1 learning environment?

With a focus on error correction or prevention, lists of errors were produced for the instructor to use as either a gauge of where students were in the learning process or to inform learners about the errors in an effort to avoid them. The implication was that the instructor interacted with the learners to identify their stage of language development and to inform them of potential pitfalls on the horizon. It can be inferred that interactions among learners were not particularly important since other learners lacked the expertise to recognize most errors and their significance. Interaction with other students would only be useful when monitored by the instructor.

Linguistics, however, was not the only field with a significant influence on FLL. Another significant grouping of theories were influenced by cognitive psychology. Whereas the linguistics-based theories concentrated on what could be learned from errors, the cognitive theories looked more at the learning process itself.

2.2.2 Cognitive Theories

As an alternative to linguistics-based theories, there are what Mclaughlin (1987) calls the "cognitive theories." These methods have a common foundation in the field of cognitive psychology and approach FLL from the standpoint of the skill-learning model of John Anderson in which learning proceeds through three stages: declarative, knowledge compilation and procedural. In the declarative stage the learner develops a database and a set of procedures to apply to the data stored in memory. In the knowledge

compilation stage, procedures are combined to create macro-procedures or hypotheses about grammar rules. In the procedural stage the learner fine tunes those macro-procedures and develops generalizations to widen the applicability of certain rules, and discriminates to narrow the applicability of other rules (Johnson, 1996).

There are many examples of cognitive approaches, including the experiential approach, McLaughlin's cognitive theory, Raupach and the Kassel group, Bialystok's bidimensional model, Schmidt's 'consciousness' hypothesis, plans and goals approach, and Gasser's connectionism model of transfer (V. Cook, 1993; Johnson, 1996; McLaughlin, 1987). The details of these varied theories are not so important as were the underlying ideas they shared. Johnson (1996) reported that at the heart of these cognitive approaches the most important concepts were:

1. there are two separate components to language learning: knowledge and control (a processing system for language performance)
2. there are two "paths" of language learning: declarative, in which learners rely on rules to generate the language structures from stored information, and procedural, in which learners access prepared information based on situational need
3. the automization of low-level skills such as verb conjugating frees up the mind for processing higher-level skills such as deciphering meaning.

The implications of these cognitive theories in terms of interaction are clear in the concept of automization. Some kind of interaction was necessary to provide enough opportunity for the low-level skills to become automatic. Like the linguistics-based theories, these theories did not specifically address the role interaction but they contributed to the creation of methodologies in which interaction plays a central role and that were better suited to deal with modern language study. An overview of the different methodologies will also provide a deeper understanding of the role interaction in FLL.

2.2.3 Historical Methodologies

One of the methods predating FLL research is known as the Grammar-Translation method and in it, language study was primarily an individual task which required very little interaction. Johnson (2001) uses Niccola Genzardi's "The English Tourist in Italy: A practical and easy method of learning and speaking Italian," published in 1910, as an example of a textbook based upon this methodology. This method was essentially the application of how the classical languages of Greek and Latin were taught to the study of a modern language. This method began with the explanation of a grammar rule accompanied by a word list of vocabulary needed to complete sentence translation exercises that followed. Those translations started with single sentences and eventually moved on to paragraphs and longer length passages (Johnson, 2001). Writing tongue in cheek, Johnson refers to this method as the "Pain Is Good For You Method," highlighting the reality that Genzardi's method was neither easy nor practical, since very little speaking was taught despite that being one of the stated goals mentioned in the title itself. The fact that this method focused on reading and writing is evident in some of the texts for Latin and Greek. For example, in the preface to their text, "An Introduction to Greek," Crosby and Schaffer (1928) explain that the vocabulary introduced are selected from the most frequently used words in the first four books of Xenophon's "Anabasis" and the syntactical structures taught in the book are likewise the most common in those works. This methodology was applied to the study of modern languages as a way to give credence to modern languages as an academic pursuit. It is interesting to note that the aforementioned Crosby and Schaffer textbook was still in use in the 1990's at a major private university, and a newer edition (2003) is currently available for purchase on Amazon.com. The amazing perseverance of this method as an "academic" study of

language gives some indication as to why early modern language advocates would have adopted similar methods.

In contrast to this language teaching approach, a group of linguists formed what they called the Quousque Tandem in the late 1800's with the expressed purpose of changing foreign language teaching methods (Johnson, 2001). The approaches they developed are collectively known as the "natural ways" and had in common the focus on making a direct association between the foreign language and objects or experience. As such, there were very specific ideas regarding how the instructor should interact with the students. One of these methods came to be known as the Series Method, developed by François Gouin in which the teacher leads a sequence of questions surrounding classroom events in the order in which they happen first instructing one student to do something, for example, and then asking others what that student is going to do, is doing and has just done, and all in the foreign language. The most famous of these approaches, without a doubt has to be the Direct Method as proposed by Maximillian Delphinius Berltiz, in fact "Berlitz schools" still exist in many cities around the globe today. It focuses, much like the Series Method, on creating an experience with which to associate the language being learned rather than associating them with other words in L1 as in the Grammar-Transaltion method (Johnson, 2001). The following capsule demonstrates the difference in how vocabulary is taught.

Grammar-Translation Method:

Textbook provides a list of vocabulary in which "book" is identified as "libro."

Direct Method:

Teacher holds up a book and says "libro." The class repeats as a group and individually.

This represents a major shift in focus from written language to spoken and led to the inclusion of a study of phonetics and was part of a movement to base FLL on theory instead of mere tradition. The approach to grammar was inductive as opposed to the deductive grammar-translation method, through the use of "sentence patterns" practice. These patterns divided grammar up into discrete points for the students to process (Johnson, 2001).

Grammar-Translation Method:

> Textbook explains: Nouns ending in a vowel are made plural by adding "s" to the final vowel. Textbook then provides sentences to translate which contain plural nouns in them.

Direct Method:

> Teacher holds up a book and says "libro," then picks up a second book with it and says "libros" with the class then repeating before moving on to another example. Teacher drills students with a series of singular nouns to which they respond with the plural forms.

These pattern drills were a central feature in what came to be known as audio-lingualism. This method evolved during the end of the Word War II out of a need to quickly train soldiers in previously under-studied languages like Japanese and other Asian languages. Audio-lingualism claimed a scientific foundation in structural linguistics and behaviorism with an approach that focused on the oral skills before the written ones and the receptive skills before the productive ones creating the order of: listening, speaking, reading and then writing (Johnson, 2001).

Along with the primacy of speech over writing, the other predominant characteristics were the use of a stimulus-response-reinforcement model, habit formation through repetition and incrementalism (dividing a complex behavior up into smaller

manageable pieces), all of which are behaviorist principles. Contrastive analysis provided a guide to identify trouble spots and learning was inductive since it was viewed as the development of habits (Rivers, 1964). Despite widespread support, research studies failed to prove audio-lingualism to be the "best" method. When stacked up against a method known as cognitive code that represented a return to many of the methods of the old grammar-translation method, the students performed better in the skills emphasized by each method, listening and speaking for the audio-lingualism group and reading and writing for the cognitive code group (Scherer & Wertheimer, 1964). Additionally, Noam Chomsky's theory about the Language Acquisition Device (LAD) weakened the fields of structuralism and behaviorism and as a result audio-lingualism began to fall from favor (Johnson, 2001).

Into the void left by the waning popularity of audio-lingualism came some methods based on the idea that Chomsky's LAD could be reactivated. The common thread in them was a belief that foreign language teachers were actually interfering with the language acquisition process. One approach known as minimal strategy suggested that teachers model their language after caretaker language (sometimes also called to as *motherese* and referring to simplified speech or "baby talk" used with infants) by providing the rough language input needed to get the LAD working again (Newmark, 1966; 1971). Steven Krashen and Tracy Terrel also contributed the Natural Approach, which shared many philosophies of the Direct Method and the Series Method mentioned earlier with a theoretical based in Krashen's input theory. Immersion programs sprang up during this time with their focus on the teaching of other subjects in the FL with the language acquisition being incidental (Johnson, 2001). Without direct instruction, interaction in the new language was the primary teaching mechanism. These methods are also evidence of the heavy influence that SLA has had on FLL.

In contrast to Chomksy's psychological approach that often isolated sentences from their context, a number of European linguists, including John Firth, were focusing on language in context resulting in a method known as audio-visualism (Johnson, 2001). With many of the same features of audio-lingualism and the direct method (i.e. the importance of spoken language), it added a presentation of the language in a vivid context through the use of visual aids. This shift to listening and speaking skills coupled with the expanding importance of context, provided more reasons to seek opportunities for interaction. The situational focus facilitated a stronger connection between image and language and as a result language study began to be organized around situations in which learners may find themselves (Johnson, 2001). For example a book targeting students studying abroad might begin with units about opening bank accounts, riding the bus, visiting the pharmacy or purchasing textbooks. It is perhaps from those roots, that sociolinguistics influenced foreign language methodologies in the notional, functional and communicative approaches. Each of these focuses more on the social functions and usage of language.

2.2.4 The Social Turn in FLL

In his theoretical paper "On communicative competence," Hymes (1970) suggested that appropriateness was a language feature that merited study and helped launch a research trend that concerned itself not only with grammar, but usage as well. One of the criticisms of methodologies that focused entirely on grammar was that grammaticality was not a sure predictor of whether or not a particular utterance would be voiced or not. For example, the sentences "Have you fire? Do you have illumination?" and "Are you a match's owner?" (Johnson, 2001, 183) are all perfectly grammatical, but native speakers of English do not speak in that fashion. While advocating a minimal language teaching strategy Allwright posed the question:

Are we teaching language (for communication)?
or
Are we teaching communication (via language)? (1979, 167)

He proposed a communicative approach in order to refocus language teaching around three basic elements: 1) samples of the target language; 2) guidance through rules, cues and simple knowledge of results; and 3) management activities that control the learners exposure to the FL samples and guidance (Allwright, 1979, 168-9). Looking back at these elements with interaction in mind, they can be considered as either interactions in the language being studied and interactions about the language within a controlled environment.

One of the results of this new focus was a reorganization of syllabus objectives from a structural syllabus that emphasized grammar to a more situational one known as notional or functional. This was clearly one of the communicative approach's big contributions to FLL as noted by Brumfit (1979) who suggested that it represented a change in the classroom procedural pattern from *presentation—drill—contextual practice* to *communicate as much as possible—present necessary items for effective communication—drill when necessary*. In the latter pattern, we see a new diagnostic focus in which interaction represents an opportunity to guide instruction rather than serving as a the way to achieve automization or to predict errors.

2.2.5 Interaction and Classroom Discourse

In FLL, interaction is often more specifically tied to the practical issues of classroom discourse and social roles. Hearkening back to Oller's (1970) statement that the difficulty was not in teaching second languages but in doing it in a classroom setting, research on classroom discourse focuses on specifically on interactions within that environment. Riley (1977) suggested three levels of structure in classroom discourse: 1) formal structure that focuses on meaning, grammar and syntax; 2) illocutionary structure

that is concerned with the pragmatic acts such as inviting, agreeing, etc; 3) interactive structure that refers to conversational tactics. The first two levels address communicative skills while the third is discursive and encompasses interactional roles. For example, in a traditional style classroom the privileges of controlling whose turn it is to speak or other things associated with classroom management belong to the teacher (Kramsch, 1981). The influence of this kind of research can be seen in studies of error correction as a kind of interaction. Chaudron (1986) studied the kinds of errors corrected by three teachers in a French immersion program as compared to their expressed priorities in language instruction, but acknowledged that there was little evidence of the effectiveness of this error correction due to the wide variety of teachers' corrective patterns and the difficult of conducting longitudinal studies.

Bellack, Kliebard, et al., (1966) suggested that classroom interactions be described by four *moves*: structuring, soliciting, responding and reacting. Structuring moves, for example, start or stop interaction, focus student attention, summarize or otherwise provide structure to the learning environment. Soliciting and responding create the back and forth of a conversation. Reacting involves an interaction that modifies one of the previous three *moves* by clarification, synthesis or expansion to name just a few. Teaching cycles were comprised of different combinations of those *moves*. Sinclair and Coulthard (1975) suggested a different system of moves with the categories of opening, answering, follow-up and framing/focusing and then detailed 21 discourse acts under those categories as illustrated in table 2.1.

Opening	Answering	Follow-up	Framing and focusing
Marker, Starter, Elicitation, Check, Directive, Informative, Prompt, Clue, Cue, Bid, Nomination	Acknowledge, Reply, React	Accept, Evaluate, Comment	Metastatement, Conclusion, Loop, Aside

Table 2.1: Sinclair and Coulthard (1975) discourse acts categorized according to move.

The first three categories are referred to as teaching moves while framing and focusing are called boundary moves (Sinclair & Coulthard, 1975). From these models it is easy to see one of the most common kinds of discourse in FLL known as the IRF, initiation (by teacher)-response (by learner)-feedback (by teacher) (Ellis, 1984). All of this implies a heavy influence of teacher control over the classroom although that is not always the case. Kramsch (1981) suggests that through the use of *natural discourse* learners can be taught to take over the discourse acts normally associated with the teacher and take control of the discourse. This leads to increased opportunity for student participation.

Ellis (1984) took an eclectic approach to explore the types of interaction found in a classroom and built a framework from previous research. This framework focuses on two aspects of face-to-face communication that he calls *address* and which deals with features such as participant identities and roles and the interactive goal. From Phillips' (1972) description of communication patterns in elementary schools on an Indian reservation, he used the possible identities of participants: teacher, pupil, class and group (a number of students together less than the whole class). He then borrowed the three roles of participants from Gremmo, Holec and Riley (1977): speaker, addressee and hearer. The different combinations these two elements create different address types or interactions (Ellis, 1984); for example one address type would be the teacher as speaker with a pupil as addressee and the class as hearer.

In discussing the interactive goals Ellis (1984) drew on Black and Butzkamm's work (1978) that distinguished between the organizational instructions that created the framework for activities and the exercises themselves that represented the core of language teaching. Borrowing the terms core and framework, he added a third kind of goal that deals with social needs outside of the pedagogic demands and is seen in

classrooms where the target language is the medium of instruction and everyday communication as well as the content (for example, English as a Second Language classrooms where there is no common native tongue). Framework goals are generally teacher initiated with teacher as the speaker and individual learners, groups or the whole class as addressees, or they might be student initiated questions regarding instructions where the learner is the speaker, the teacher is addressee and possibly other learners (individual, small group or whole class) are hearers (Ellis, 1984). Core goals can be divided into three categories, medium-oriented, message-oriented and activity-oriented. Medium-oriented goals are those in which the primary function is instruction about the language being studied (Butzkamm & Dodson, 1980). The address types associated with this kind of interaction are teacher-class, teacher-pupil (class)—teacher interacting with an individual learner while the rest of the class listens in— teacher-group and in some circumstances such as when the teacher wanders the room helping individuals, teacher-pupil. In these interactions the teacher holds the role of speaker and the learners that of addressee or hearer (Ellis, 1984). He speculated that most interactions in language classrooms involve medium-oriented goals. While he cites no evidence, not even anecdotal, it seemed a reasonable assumption at the time he offered it, based on traditional teaching methods. However, with the changing face of education in the last two decades due to the influence of cooperative and/or collaborative learning strategies and others it is certainly not a premise to be accepted without question any more.

Message-oriented goals are common in classrooms where FLL takes place through teaching other content in the target language. In fact, it has been argued by some, including Widdowson (1978), to be one of the most effective ways of teaching language. Exercises in listening and reading comprehension are examples of message-oriented goals as well, since the object is understanding the message rather than learning or

manipulating specific structures (Ellis, 1984). Ellis also provided an example from an Allwright study (1980) showing an interaction that begins as a medium-oriented but is shifted by the student to a message-orientation. Allwright suggested that the interruption could be viewed as good or bad depending on which kind of interaction better facilitated learning. As he did with the medium-oriented goals, Ellis (1984) suggested that message-oriented ones also generally have a teacher-class structure.

Activity-oriented interactions are those with the focus on the completion of a specific task. Ellis (1984) describes these kinds of interactions as having a wider range of possible address types with learners often initiating the interactions. In activity-oriented interactions language is viewed as a means rather than the end goal of these and, historically, have been more common in primary schools. There has been substantial experimentation with task-based teaching including the Bangalore project (Prabhu, 1987) in which the central hypothesis is that a focus on meaning results in better learning of structure. Ellis took the concept of a notional/functional syllabus one step further by creating a procedural syllabus. The underlying difference between the two is one of specificity. While a notional/functional approach would have goals such as describing yourself, talking about your family, etc., a procedural approach would actually list the tasks to be accomplished like introduce yourself, tell how many people are in your family, ask how many are in someone else's, etc.

Duff (1986) studied different kinds of tasks, distinguishing between a convergent task such as a problem that requires learners work collaboratively to solve and a divergent task such as debating the pros and cons of a topic. The data supported the hypothesis that convergent tasks promote more negotiation for meaning, because problem-solving interactions produced more turn-taking, units of conversation and questions. On the other hand the divergent task of debating created longer turns and more

complex and extended discourse. Her conclusion did not discount the usefulness of divergent tasks so much as suggested that they may have a complementary role.

Methods for teaching foreign languages have included a number of interaction types. Much of the research into interaction looked at interactions initiated by the teacher that elicits a response from the learner(s) and ends with an opportunity for feedback (IRF). These prompts are directed to the class as a whole, to an individual with the rest of the class observing, or to a group of students within the class. These kinds of interactions generally focus either on the language itself (i.e. grammar structures) or on deciphering a message. More recently, there has been an increase in the study of interaction among students to complete convergent or divergent tasks that provide opportunities for a greater quantity and increased complexity of language use.

2.3 SECOND LANGUAGE ACQUISITION

FLL shares a lot of its historical roots with theories of Second Language Acquisition (SLA) and as such it is likely to make meaningful contributions to understanding the nature of interaction. SLA is a field rich with theory regarding interaction and its role in the learning process. Gass and Selinker (2000) state the following in regards to the term SLA:

> This is the common term used for the name of the discipline. In general, SLA refers to the process of learning another language after the native language has been learned. Sometimes the term refers to the learning of a third or fourth language. The important aspect is that SLA refers to the learning of a nonnative language *after* the learning of the native language. …[It] generally refers to the learning of a non-native language in the environment in which that language is spoken (e.g., German speakers learning Japanese in Japan or Punjabi speakers learning English in the United Kingdom). This may or may not take place in a classroom setting. The important point is that learning in a second language environment takes place with considerable access to speakers of the language being learned, whereas learning in a foreign language environment usually does not. (5)

As mentioned earlier, this definition distinguishes SLA from FLL, which is typically considered to be the learning of a nonnative language within the environment of the native language (Gass & Selinker, 2000) for example English speakers learning Spanish in the United States.

In the past another term, Second Language Learning (SLL), has been distinguished from SLA. Block (2003) explains that support for a difference in the terms is founded in Krashen's distinction between acquisition and learning, the former being a subconscious or informal process while the latter is a conscious or formal one (Krashen, 1978). Krashen's theories about acquisition and learning found a parallel in the field of cognitive psychology as indicated by a couple of articles by Schneider and Shiffren (Schneider & Shiffrin, 1977; Shiffrin & Schneider, 1977) on automatic and controlled processes. Block (2003), however, notes a lengthy trend of using the terms interchangeably. The term Second Language Development (SLD) has also been used synonymously with SLA (for example in Ellis, 1984), however in the interests of clarity, I will use SLA in the place of both SLL and SLD. A few other terms and acronyms of importance include NS for native speaker and NNS for non-native speaker.

2.3.1 The Foundations of SLA Theory

Ellis (1984) reports that there has been no shortage of researchers offering theories and models of SLA (he prefers to use the term SLD – Second Language Development). Modern SLA research, however, has evolved out of three main theories: the Monitor Model (Krashen, 1978), the Acculturation Model (Schumann, 1978) and Conversational Analysis (Hatch, 1978). In the Monitor Model, meaningful interaction in the target language facilitates the acquisition of that second language on a subconscious level. These interactions provide the learner with "intake" which becomes internalized language. Consciously learned grammar rules then act as a monitor for language output.

The only other benefits of formal linguistic study of a language is for the learner's appreciation of the language structures and to provide the learner with confidence (Krashen, 1978).

The Acculturation Model refers to "the social and psychological integration of the learner within the target language group" (Schumann, 1978). It describes a number of factors that contribute to language acquisition including those of a social, affective, personality, cognitive, biological, aptitude and personal nature (Schumann, 1978). A stark difference between this and the Monitor Model is Schumann's assertion that direct instruction does have value and can result in language acquisition, but only under the right circumstances. Factors that influence acculturation need to be manipulated so as to create an artificial climate in which direct instruction can facilitate acculturation.

The basis of Conversational Analysis is the premise that language learning is a result of learning how to interact verbally and that syntax development is a side effect of learning how to converse (Hatch, 1978). This theory has led to the use of discourse analysis as a methodology for investigating language learning. On the surface it seems to have much in common with Error Analysis, but one major distinction between them is the unit of analysis. Conversational Analysis takes into account the context and purpose of utterances within a dialogue, while Error Analysis focuses on individual utterances in isolation, ignoring the significance of the interactions that produced the speech.

There have also been significant contributions from the field of psychology that helped to guide some significant SLA research. One of these, Interactionalism (G. Cook, 1982), is described as the interplay between the learner's contribution to learning and the learning situations in which the learner participates. Learner contributions can include such elements as motivation and expectations, learning and communication strategies and level of cognitive development while the learning situations include the context and

environment in which the learning takes place, for example, classroom instruction or immigrant worker experiences. Cook used the four tenets of interactional psychology related to behavior as described by Endler and Magnusson (1976) and applies them specifically to SLA. Those four axioms are:

- Actual behaviour is a function of a continuous process or multidirectional interaction (feedback) between the individual and the situation that he or she encounters.
- The individual is an intentional active agent in this interaction process.
- On the person side of the interaction cognitive factors are the essential determinants of behaviour, although emotional factors do play a role.
- On the situation side, the psychological meaning of the situation for the individual is the important determining factor. (968)

Cook (1982) used this as a basis to critique the aforementioned SLA[1] models with regard to how each incorporates interaction. His criticism of the Monitor Model was that while there is indeed great detail in describing the characteristics of intake, the role of interaction was limited to just a means of providing intake. Also, the concept of intake can only be studied by introspective reports from learners, and because of that these theories tend to overlook other aspects of interaction that could contribute to the phenomena being explained. For example, it fails to consider how interaction can provide an external monitor of grammaticality.

Cook (1982) praises the Acculturation Model for its emphasis on the interaction between the social situation and learner traits and experiences. He agrees with the concept that language learning is an inherently social process that fulfills social needs,

[1] It should be noted here that Cook uses SLL and SLA interchangeably in this article, starting with SLA at the beginning and then switching to SLL later in the article.

but criticizes the lack of information about the behavior produced by these interactions. Whereas the Monitor Model focused too much on the language input side of things, this model describes interactions from the standpoint of learning and social environments in detail without exploring their end results.

Conversational Analysis drew attention to the different roles of those participating in the interaction and it focused a great deal on the different kinds of prompts that a learner might receive. In its early stages, Cook (1982) still found this model lacking a connection between interaction and behavior. For him these three models represented what he called a "black-box" learning model, in that you see what goes in one side (input and intake for Krashen, acculturation factors for Schumann, or a prompt from a "leader" for Hatch) and what comes out the other (language to some degree of proficiency). What then was the nature of interaction inside that box that resulted in language learning?

Each of these theories acknowledged the concept of interaction as a key element in learning. Cook (1982) agreed that was an obvious point and went on to suggest that interactions might be seen as teaching techniques and manipulated according to the needs of the learners. This view and the use of discourse analysis have led to further development of theories regarding interaction. Hatch's work on the importance of conversation coupled with Krashen's emphasis on the importance of input served as a basis for Long's interaction hypothesis (Mackey, 1999).

2.3.2 Interaction in SLA

The roots of research in SLA on interaction itself stems back to the study of *foreigner talk*. This refers to how native speakers alter their speech patterns to ease understanding and resolve misunderstandings when communicating with foreigners in ways reminiscent of how caretakers talk to babies (Hall & Verplaetse, 2000). There have been many studies of *foreigner talk* as well as *teacher talk* hoping to establish a causal

effect between these discourse styles and SLA (Brock, Corookes, Day, & Long, 1986; Chaudron, 1986, 1988; Hall & Verplaetse, 2000; Michael Long, 1983; Schinke-Llano, 1986; Strong, 1986) as well as studies comparing them to *motherese* or *caretaker talk* (Ferguson & Debose, 1977; Freed, 1980).

Long developed his interaction theory from differences observed in the conversation patterns of native speakers paired with other native speakers (NS—NS) and those paired with non-native speakers (NS—NNS). The NS—NNS pair conversations included a variety of tactics to resolve communications difficulties such as repetitions, confirmation checks, comprehension checks and clarification checks (Mitchell & Myles, 1998). After some criticism surrounding the generality and lack of depth of the hypothesis, Long refined it and redefined it to highlight the selective attention to environmental contributions occurring during negotiation for meaning. Negative feedback received during a conversation, such as recasts where the native speaker restates the non-native speaker's utterance with the appropriate corrections, facilitates second language development (M Long, 1996). It should be noted that in the context of SLA, negative feedback refers to any kind of response, verbal or physical, from which the learner would understand an error has been committed.

Gass and Selinker (2000) also report the widespread acceptance that attention, especially selective attention, plays a major role in learning and that interactions play a key role in focusing the attention on contrasts or mismatches between their utterances and those of speakers of the target language. Attention to these contrasts then raise the level of metalinguistic awareness. They cite several examples of research indicating that interaction may be a "forum for or a facilitator of language development" (Gass & Selinker, 2000, 298). One of those is Mackey (1999) who studied the relationship between conversational interaction and SLA. Her study provided evidence in support of

Long's theory, showing that learners in a group participating actively in interactions where meaning is negotiated experienced in more language development. This was measured by pre- and post-tests against a group merely observing the interaction without participating, a group using a partial script to create a passive interaction and a control group. Her study highlights the importance of activity to the nature of useful interaction.

Interaction is the centerpiece of the Input-Interaction-Output model which became the prominent model of recent decades, rising out of the need for something more verifiable and complete (Block, 2003). Gass (1997) described a SLA model that is considered one of the most comprehensive. It details the path from input to output through the four intervening stages of apperception, comprehended input, intake and integration. Apperception is the stage where the learner becomes aware there is something to learn, that there is a gap in communication that needs bridging. Comprehended input is what the learner actually understands and hence begins the intake process. Intake starts with the comprehended input that made it past all the barriers to understanding and begins to process it by matching it against prior knowledge, creating and testing hypotheses and finally rejecting, modifying or confirming those hypotheses. Finally, the results are stored and developed into a grammar structure before affecting the learner's output (Gass, 1997). While there is no specific mention of interaction as one of the stages, the whole process itself works on a feedback loop and comprehended input, intake and integration all represent some form of interaction be it with prior knowledge or hypothesis testing. Output itself is characterized as a manifestation of the acquisition process. One of the strengths of Gass's model is that it accommodates many other theories and models as well (Block, 2003).

2.3.3 A Social View of SLA

In contrast to the input-interaction-output (IIO) theories, another research thread emerged advocating a more sociolinguistic view of language learning with Sociocultural Theory and Activity Theory (Block, 2003). These theories have their roots in Vygotsky's perspective on human development, and language is viewed as an artifact produced by the interaction between individuals of a group in a specific setting and environment. Whereas the IIO theories take the approach of studying language learning as an internal, self-regulated process, a sociocultural perspective offers the idea of external linguistic mediation from another to assist the learner. This scaffolding takes place in interactions between people where at least one acts as a mentor to promote the language learner's appropriation (not acquisition) of new knowledge. The environment in which this learning takes places is known as the Zone of Proximal Development (ZPD) (Block, 2003).

Another important contributor to this social perspective is Lily Wong Fillmore, whose model for second language learning included three components. First was learners who realize that they need to learn the Target Language. Second was speakers of that language who know it well enough to provide the access and help the learners need. Finally, a social setting that brings those two groups together in frequent enough contact so as to make learning possible (1991). That social setting is essentially an enabler of interaction. Also part of this model are three processes: a linguistic, a cognitive and a social one. The first two are internal processes through which the target language speakers' assumptions about the language cause them to select, modify and support the linguistic data they produce for the learners and through which learners figure out rules and synthesize a "grammar." The social process is the interaction itself (whereas the other two are preparation for or analysis of interaction). These are the steps taken by both

parties to create social contact so that learners can observe speakers of the target language in natural communication and target language speakers can become aware of the learners' linguistic needs in order to make accommodations and adjustments (Fillmore, 1991).

Van Lier (1996) proposed a more sociocultural approach to language learning that he called AAA: awareness, autonomy and authenticity. Language awareness focuses on a knowledge of the effects of language in different domains such as those described by James and Garret (1991): affective, social, power, cognitive and performance. Autonomy incorporates motivation as a primary focus and achievement is closely related to it as well. He discussed the various theories that characterize both intrinsic and extrinsic motivation as well as integrative and instrumental motivation. He lamented the fact that many discussions and studies of motivation focused primarily on future goals like achievement as sources of motivation, overlooking intrinsic ones that exist concurrent to learning. Authenticity can be viewed in terms of origination of the linguistic material being used or as a process of validation (Van Lier, 1996). He argues in support of Widdowson's (1990) views that this is a process that "establishes relevance and it endorses, rejects or revises prior utterances" (Van Lier, 1996). In relating his AAA curriculum theory to the classroom, he categorizes possible classroom interactions as a continuum ranging from transmission to initiation-response-feedback to transaction and on to transformation. Much like Cook's view of interactions as classroom techniques, Van Lier proposed that these interactions along with scaffolding, critical thinking and learner training were the fundamental strategies for language learning. Particularly useful were those he called contingency interactions that existed at the transformation end of the continuum (Van Lier, 1996).

Activity Theory divides learning into three subcategories: activity, action and operation. Activity, the first level, begins with the creation of a need that translates into

an objective and results in a motive. From there the action stage progresses toward a goal to be followed by action. That action and the conditions in which it takes place combine to create the operation, which could be described as the overt behavior. In other words, it all begins with why something is done, then progresses to what is done and how (Block, 2003). This leads back to the term appropriation as language, rather than being "acquired," is taken over and made one's own (Wertsch, 1998). Another claim of Activity theory is that there should be no expectation that any two individuals learn in the exact same way, and as such we need to take into account individual goals and motives and how personal history shapes a learner's agency in language learning. As individuals exercise that agency and interact with others, the result is additional variables that may benefit or detract from learning (Lantolf & Pavlenko, 2001).

Block (2003) notes that there is an increasing acceptance and use of sociocultural theory and methodology in recent studies. He suggests that the future SLA research have an interdisciplinary approach that incorporates both the IIO theories with this new social turn. He speculates that IIO researchers will continue their focus on input, the nature and role of interaction, especially as it is involved in the negotiation of meaning, in order to further understand the cognitive functions in SLA. He also conjectures that there will be an increasing interest in learners' reflections and personal histories.

Theories of SLA point to several functions of interaction in learning. It provides comprehensible input as a starting point for developing internal language rules. When language learning is seen as the integration of an individual into a community, interaction is the means by which this takes place. In many ways, interaction is seen as the learning process itself. As such, active participation in (as opposed to mere observation of) interaction is viewed as a key to more productive learning. Likewise, interaction is seen as a way of generating feedback that the learner can use to confirm or revise the rules

created from language input and analysis. Theoretical links to interactional psychology point to interaction not merely between individuals but also between an individual (as the sum of ones experience and psychological makeup) and the communicative situation.

2.4 COMPUTER-ASSISTED LANGUAGE LEARNING

Although there is still discussion and research into the exact role of interaction in the process of learning a foreign language, by all accounts it plays a key role. Technology has long been looked at as a way to provide or facilitate interaction. The historical argument for a focus on speaking and listening skills, as well as writing and reading, created the venue for the introduction of technology into the realm of foreign language instruction. As early as 1927, we can find published recommendations for records that could be used in the language classroom (Pattée, 1927). Ohio State University had foreign language classes taught by radio during the same time frame (Monroe, 1931). As technology has evolved we have come from records to interactive CD-ROM and from radio to live, two-way video teleconferencing.

In the last quarter century, there has been an enormous influx of new technologies into the classrooms with computers becoming a common classroom fixture. In fact, in the mid 1990's Squires and McDougall (1994) reported that the discussion had already shifted from the topic of computers in every classroom to portable ones for every child who wants it. The research investigating and discussing the use of computers and telecommunications in the classroom include computer-assisted instruction (CAI), which was not subject matter specific. As language teachers became involved there arose a research thread first known as FL-CAI (foreign language computer-assisted instruction) that later evolved into computer-assisted language learning (CALL). From that point, there have been some even more specific threads that have been influenced by research outside of CALL including intelligent computer-assisted language learning (ICALL),

which has incorporated work from computer-based adaptive testing, and network-based language teaching (NBLT), which relies heavily on computer-mediated communications (CMC) to address specific FLL concerns.

2.4.1 Early CALL Features

In some of the academic literature CAI and CALL have been used interchangeably, however most authors now make a distinction. Even though most differentiate between them, there is not a consensus on what exactly the difference is. CALL has been considered by some as the foreign language area of CAI while others imply that CAI represented new material presentation and CALL drill and practice. Garret (1987), however offers, perhaps, a more useful distinction; one which focuses on what served as the basis for design and decision-making. She refers to early foreign language computer-assisted instruction (FL CAI) as machine-driven with the limitations of the computer creating the boundaries of what developers could produce. Later stage FL CAI was teacher-driven as the idea that computers should behave as much like a "good teacher" as possible guided much of the software development, and in fact many of the developers themselves were teachers or former teachers. CALL, she emphasized, focused on learning rather than instruction and as such was (or should be) learner-driven.

In addressing a methodology for the integration of computers in the language learning process, Weible (1987) describes three unique characteristics of CALL that were not available in other instructional media and which were not being exploited at the time. These are a good place to begin in distinguishing CALL from other media. The first trait he called structured interaction and considered this the most noteworthy difference. Since a program sets the parameters for material presentation "it defines precisely the nature of the student's approach to and interaction with the subject matter" (74-75). As an example he cites one of Steinberg's (1984) distinctions between a textbook and CALL media in

that the CALL author needs to make control decisions that a textbook author does not. For instance, the former must not only decide how many practice items or questions to include (as would the latter) but also whether or not to force the learner to complete all or even any of them. This control over the structure can range from the totalitarianism of a mere electronic page-by-page presentation with almost no learner control to such absolute freedom that the learner may not know where to begin. Indeed this was one of Steinberg's concerns that the learner is the least qualified to choose a "reasonable sequence of topics" (1984, 98).

The second feature Wieble (1987) described was that of a process orientation. The ability of a computer to simulate a process gives it the capacity to "show" a linguistic process removing the necessity of explanations often mired by abstract grammatical terminology. He cited examples of programs intended to simulate communicative situations in the target language but acknowledged that although they were a promising start, most were extremely complicated programs that would likely be of limited interest to classroom teachers. Garret (1987) expanded on this use discussing a processing approach to CALL grammar lessons dividing them into four categories. First was raising awareness about how "a language's forms encode a variety of different kinds of information—semantic, syntactic, pragmatic, discourse and sociolinguistic" (184), but without resorting traditional labels that often conjure a negative reaction in the learner. Second was the presentation of key structures in the target language in "a contrastive analysis of processing" (185) instead of contrasting the linguistic rules between the native and target languages. Third was the most complicated, the development of language specific structures where a comparison with the native language equivalent is not necessarily helpful. Fourth was a check of the surface structure, as suggested by

Krashen's Monitor Model (see: Krashen, 1978). The major idea behind this processing approach is showing *how and why* rather than just trying to explain *what*.

Weible's third quality is that of automated individualized instruction (1987). This refers to the program's ability to recognize the individual needs of different learners and modify the presentation of materials accordingly. This actually creates a give and take relationship between computer and user. While the software is "programming" the learner, the learner is likewise "programming" the software and altering it to the learner's advantage.

Many of the discussions of CALL, including the aforementioned characteristics, centered on design concerns or how to create opportunities for the learner. Pusack and Otto (1984) suggested four categories of or design approaches to CALL applications: practice/diagnosis, tutorial, simulation/problem solving and utility, and Pusack (1987) later described them in greater detail.

> Practice. Current practice programs usually offer discrete-item drill on a sequence of structural features of the target language. Simple drill programs that present items in a fixed sequence and undertake processing of student input tend to fall into the oft-scorned class of software dubbed "computer flashcards" or "electronic workbooks."
>
> Tutorial. Tutorial programs have the goal of presenting language skills and concepts in a more efficient or effective fashion than textbooks or classroom explanations. These programs exploit the computer's power to present information dynamically, adjust the materials to the learner's own abilities and keep careful records of student progress.
>
> Simulations and Problem-solving. Simulations place learners into a small model of reality in order to expose them to cultural content or foster use of the target language in a lifelike context. In most simulations, the task posed by the simulation takes precedence over correct production of the target language; the emphasis is on comprehension and meaningful production. Adventure games fall into the category of simulation. Problem-solving programs likewise pose a task, but may not stress the student's involvement in a fictional situation as strongly as do simulations. Reading and listening comprehension programs that require the

> learner to extract complex information, often involving critical thinking skills, can be viewed as problem-solving software.
>
> Utility. Utility programs place a very high priority on the ability of students to make decisions in using the computer for language learning. Word processing (e.g., target-language composition) is the most familiar example. The emerging generation of software will bring with it many programs that give students tools for evaluating their own writing, for reading texts more efficiently, and for diagnosing their own weaknesses. (Pusack, 1987, 15-16)

2.4.2 ICALL and Intelligent Tutors

There were many criticisms of and objections to early CAI and CALL applications. Lesgold (1988) elaborated on two general problems with CAI: the lack of a distinction between the initial presentation of material and remediation, and the absence of knowledge to connect the distinct but related lessons. In essence his complaint was that the only way to remediate was to redo the presentation and that the lessons were both taught and tested in isolation. Among the concerns addressing CALL specifically were: "1) a depersonalizing of language teaching; 2) programs of inferior quality; 3) inflexible interaction with the learner; 4) no monitoring or validation; 5) inappropriate testing methods; 6) not adaptable to modern methodologies; 7) no 'intelligent' awareness of either the teacher or the student model" (Last, 1989, 39). It is these kinds of objections that ICALL and ITS intended to address. In the introduction to a collection of ICALL project reports (Holland et al., 1995) the editors shared their approach of asking the contributors to discuss how theory drove their use of technology. They report that theories of SLA, particularly of interaction, as well as communicative approaches to foreign language learning have propelled ICALL development in the direction of microworlds and animated scenarios where learners interact using target language. They also found that not only did theory shape the tutors, but those tutors helped to clarify theories which were often vague or used loosely in academic writing.

Lesgold (1988) suggested that structure of ITS consisted of three layers: 1) the knowledge layer, which was essentially the corpus of underlying information—declarative and procedural; 2) the curriculum goal lattice layer, which is the structural confines from which the knowledge is accessed, resembling a tree with the knowledge kernels accessible from multiple pathways; 3) the metaissue layer which individualizes instruction to the learners based on variables such as aptitude, prior knowledge, learning styles, etc. A similar but perhaps better developed description of how ITS is structured can be found in the introduction to an edited book on foreign language intelligent tutor systems (Swartz & Yazdani, 1990), Swartz identifies the key feature of intelligent language tutors is their ability to adapt to individual learners. They are made up of four components: the expert module, the learner module, the tutor module and the interface, which is the learning environment.

The drawbacks and criticisms of ICALL summarized by Salaberry (1996) essentially come down to the fact that, at best, it was not feasible at that time and, at worst, perhaps not possible at all. The linguistic theory behind ICALL programs has not progressed beyond the experimental stages yet, the hardware requirements are somewhat prohibitive and interface design has been neglected. As often happens when someone complains that the technology "just isn't there yet," Tsiriga and Virvou (2003) have addressed those concerns and demonstrated experimentally that their ICALL program for tutoring the English passive voice produces better learning results than the same program without the student module that individualizes the instruction. When the program navigation was left entirely to the control of the learner by stripping away the error diagnosis component there was no way to resolve ambiguity when mistakes could have multiple causes. There was only one grammar point is addressed in this application, and the conclusion that ICALL outperforms CALL is perhaps akin saying a private tutor gets

better results than classroom instruction. Still, there were a couple of interesting aspects of the study. Given past criticism, the fact that an ICALL program appeared to be functioning as predicted is itself a noteworthy finding and since the subjects were 5th and 6th grade students it would be reasonable to suggest that interface design issues have also been addressed. Another interesting feature is its web-based delivery system, the implications of which will be considered in the next section.

Some of the more recent work in ICALL has begun to fuse computer-based adaptive testing and task-based learning such as the project by Gonçalves, et al. (2004) to teach academic English. The computer assesses students with a limited number of questions to estimate the learners' ability and then guides them to the appropriate task-based module. The addition of the task-based scenarios is a new feature of the tutor module and interface. The effectiveness of this intelligent tutoring system is still being evaluated but shows promise in preparing students for the official university assessment required of them.

2.4.3 The Internet, Network-based Language Teaching and Computer-mediated Communication

The late 1980's and 90's brought yet another innovation to the arena of CALL, the Internet and other networked-based platforms (Levy, 1997). The uses of the internet range from a information clearinghouse to a publication forum to an interpersonal communication medium, and Maddux et al. (2001) reported on its widespread use in educational settings. The common thread in these uses is the idea of medium. Others have agreed with that principle, in fact Kern and Warschauer (2000) stress that Network -based Language Teaching (NBLT) is a communication medium and "does not represent a particular technique, method, or approach" (17). Lafford and Lafford (1997) discuss in great deal how to find up-to-date and "authentic" materials in order to facilitate SLA,

distinguishing between those sites requiring written or oral production and those in which the learner merely receives input such as Webquests, an inquiry-oriented activities in which learners are guided through an investigation into a topic with resources from the Internet. A more complete description as well as examples and explanations about how to create them can be found on the Web at http://Webquest.sdsu.edu/ courtesy of San Diego State University.

Computer-mediated communication (CMC) is defined in the literature as "use of computer systems and networks for the transfer, storage, and retrieval of information among humans" (Santoro, 1995, 11). While this definition is broad enough to include mere depositories of information, it also includes what Salaberry (1996) refers to as "Conferencing Services." These can be asynchronous such as in the example of email, listservs, and bulletin boards, or synchronous as in internet relay chat (IRC), audio/video conferences and MOOs (Multi-use domains, Object Oriented). Web conferencing can be text-based as in the example from Angeli, Valanides and Bonk (2003), but there are also audio and video-conferencing tools such as Internet Phone and CUSeeMe, which is reflector-based (Kouki & Wright, 1999). White (2003) considers CMC to be an important development for its ability to provide a support system, a sense of community, a way to learn from the questions of others, alternative perspectives, time for processing and reflection, access to previous discussions, motivation and a sense of control.

Among the many applications of the Internet for learning; Granlund, Berglund and Eriksson (2000) advocate the creation of Web-based simulations to take the place of environments that are too costly or dangerous or would just require too much time to set up. Kam, Cheogn, et al. (2002) report on the creation of a virtual physics lab on the internet that includes interactive animations of experiments that distance learners would

not have access to in a lab. Angeli, Valanides and Bonk (2003) report on using Web Conferencing to promote high quality discourse and critical thinking among students.

The previous examples are but a few that illustrate the wide range of applications of the Web in education. How these are manifest in a course also varies. Woolls, Dowlin and Loertscher (2002) mentioned Web-assisted and Web-based levels of instruction as part of their "third level of learning" but they did not take the time to define those terms. Boettcher (1999), however, proposed a more complete and descriptive breakdown of how the Web can be used in education. The minimal level of Web involvement is "Web presence" in which the course syllabus along with bibliographies and other general information is available to students more for marketing purposes than instructional ones. A "Web-enhanced" course is one in which course material is distributed over the Web and students themselves begin to access its resources. A "Web-centric" course is a true hybrid, splitting time equally between the face-to-face classroom and student participation via the Web. This kind of course begins to address the needs of students with less flexible schedules who cannot accommodate as many classroom meetings. The final category is that of "Web course" in which the course can be accessed anywhere at anytime via the Internet and a Web browser and do not require any location-specific meetings. These are the most attractive to students in remote areas or with inflexible schedules that do not accommodate regular class meetings. The reality is not as cut and dry as the four categories might make it appear. There certainly exists a continuum between them, but this description does make it easier to discuss the topic.

Where the Web and distance education have come to meet is in what Boettcher (1999) referred to as the Web course. Others refer to this as a Web-based course (Booth & Hulten, 2003; Lim et al., 2003; Woolls et al., 2002) and the key difference between this use of the Web and others is that here the Web is not merely a tool, but it is in fact

the delivery medium as well. Bork and Gunnarsdottir (2001) report that the Web now invites the most attention as a delivery method for distance learning (which will be addressed in greater detail in 2.5). While acknowledging the wide reach of the Web and the ability to change material quickly, they point out some problematic issues in the current state of Web-based instruction. Among those is a lack of interaction and individualized help for students, global digital divide issues, and high drop rates in online courses. Kouki and Wright (1999) agree that the dynamic nature of information on the Web is one of its primary advantages and also include the use of hypertext as another benefit. They list among the limitations bandwidth issues, problems with old computers, information overload and relocation or removal of URLs.

2.4.4 A History of CALL Research

As noted in the previous section CALL is a learner-oriented medium that provides the opportunity for interaction within a structure with the potential for a process approach to material presentation and individualization of instruction. It is used for the purposes of practice, tutoring, simulated interaction, electronic communication (through CMC) or self-evaluation. It is important to note that this description was based on existing software and project reviews with some extrapolation as to their potentials, not on theory. Beatty (2003) laments that the field "suffers from fragmentation and a lack of scientific rigour" (2), describing advances as non-linear and often tied to the agendas of software application designers. He cites Fox's observation that:

> To a surprising degree, CALL seems uninfluenced by developments in applied linguistics, linguistics methodology, etc. Many CALL exercise types have changed little since the early 1960's. Conferences on CALL frequently permit papers of the type "Me and my programs", which would not be accepted at other conferences. (Fox, 1991, 236)

Support for this position can be found in Levy's (1997) review of CALL projects organized by program. He lists 28 representative programs each addressing a unique combination of program type and point of departure, driven by either instructional theory, learning theory, curriculum demands, technology potential, language skills and material delivery systems. He likewise lists 24 separate disciplines that have contributed to CALL and reduces them to six categories: Psychology, Human-computer Interaction, Artificial Intelligence, Computational Linguistics, Applied Linguistics and Instructional Technology and Design. With all these varied influences, it is easy to see why the field is in the fragmented condition suggested by Beatty (2003).

When looking into research on CALL it is likewise easy to find the lack of "scientific rigour" decried by Beatty. Pederson (1987) cites many claims of how one of the early CALL manifestations, the language laboratory of the 1950's and 60's, was going to be a miraculous new addition that would multiply both the teacher's effectiveness as well as the student's learning (see: Hocking, 1959; Huebener, 1967; Mathieu, 1960; McGraw, 1959; Young, 1959) but he agrees with Stern (1983) that there was very little systematic research on how to use them. Eventually, the research followed, the preponderance of which was comparative in nature. In the early 1980's researchers were raising the concerns that materials development was outpacing research in CAI in general and particularly in CALL (Meredith, 1983; Putnam, 1983).

Pederson (1987) reported that, in addition to a scarcity of research into how computers could improve learning, those studies which questioned whether or not computers did improve learning, predominantly concluded that there were no significant differences resulting from the CALL experience. The comparative studies that demonstrated differences had issues that called the results into questions. Pederson provides the example of a study (Schrupp, Bush, & Mueller, 1983) that did find that

students who underwent their video instruction guided by a CALL program performed better on a post-test than a control group. Unfortunately, the sheer number of variables within the treatment, many of which had nothing to do with the interactive video, made it impossible to conclude that the gains on the post-test were the result of the interactive video itself. Based on these kinds of studies that either demonstrated no significant differences between CALL and non-CALL groups or did not account for other variables that may have played a role in the outcome, Pederson (1987) concludes that comparative research cannot provide generalizable results and suggests that investigation into how to use CALL.

Chappelle and Jamieson (1991) likewise concluded that there was no empirical evidence of CALL's superiority to classroom instruction, however a later look at 22 studies ranging from 1989-1994 (Meich, Nave, & Mosteller, 1996) concluded that CALL could improve language achievement. Beatty reported that this thread of research has waned because "computers are here to stay" (2003, 14) and that CALL is now seen as a complement to the classroom. His review of 145 journal articles indicated that indeed there had been a shift to studying *how* to use CALL applications and mediums.

2.4.5 Recent Directions in CALL Research

There have been several recent overviews of technology and its role in FLL (Gamper & Knapp, 2002; Liu et al., 2003; Schwienhorst, 2002; Zhao, 2003). Liu, Moore, et al. (2003) was clearly the most thorough review; they explored the questions of how computers have been used in the foreign language classroom during the decade of the 90's and what evidence exists of language skills being improved through the use of computer-based technology. They made a critical distinction between research and non-research based articles; out of a total of 246 they reviewed, the majority (176) were non-research based articles that fit into one of four categories of conceptual discussion about

and project descriptions of potential uses in specific areas, skill-specific software tools, software design concerns and computerized testing. From the remaining 70 studies the authors reported that evidence existed to suggest that visual multimedia supports vocabulary acquisition and reading comprehension based on increases in achievement tests. Several studies indicated that online communication tools improved writing skills and provided a more equal opportunity to participate for all learners. Their conclusions included recommendations that future research have a more solid basis in theory, software development be grounded in pedagogical theory, research should focus on the less-studied skills of listening, speaking and culture.

Zhao's (2003) goals were to 1) assess the effectiveness of technology in language learning through meta-analysis; 2) identify patterns of technology use; and 3) identify ways to use technology effectively. He concluded that technology-based instruction can be as effective as teacher-delivered, but admits this conclusion must be viewed with caution due to the small number of studies reviewed (only 9 met his criteria), and that journals may be reluctant to publish studies in which there are not significant positive results, and that subjects of the studies are all college students (a concern also of Liu, Moore, et al, 2003). Another caution was that much of the research was conducted by instructors with their own students and evaluation instruments. He reported that the current literature identifies essentially three functions of technology in foreign language learning: 1) providing access to linguistic and cultural materials in efficient, authentic and comprehensible ways, 2) providing communication opportunities by interacting with and via the computer, and 3) providing feedback through grammar and spell checkers, speech recognition and learner tracking. Taken together with other reviews, Zhao's analysis seems reasonable, and the cautions he raised are important to consider.

Schwienhorst (2002) wrote a specific overview on the current state of virtual reality (VR) in FLL (he used the term SLL). One of the criticisms of VR use is that the high-end technology it requires to create the immersion into the new virtual environment (e.g. head-mounted displays, voice recognition software, body-tracking equipment) is still too expensive and cumbersome to gain widespread use. His review revealed many low-end VR that despite their dependence on text-based environments shared important features with the immersion style VR such as the use of spatial metaphors for information organization, virtual identities, a virtual location as a shared meeting place and artificial intelligence (AI) agents or bots with which to interact. The few research-based studies available indicate problems with conversation management (multiple thread conversations, for example) and technical demands as impeding interaction, as well as the perception of teacher intervention as intrusive encroachments on learner autonomy. On the positive side, learners developed negotiation strategies to facilitate their communication similar to those used in face-to-face situations including paraphrasing and restating, for example. Although there were some examples of research-based studies, much of what he reviewed was indeed speculation on the potential of these items, similar in vein to many of the articles reviewed by Liu, Moore, et al. (2003).

Gamper and Knapp (2002) provide a survey of 40 Intelligent CALL (ICALL) systems and categorized them in terms of language, AI techniques, language skills (reading, writing, listening and speaking), language elements (grammar, vocabulary or dialogue elements) and availability. Their analysis showed that the 60% of ICALL systems addressed writing skills with 40% including reading while speaking and listening skills were addressed in only 30% and 10% respectively of the systems reviewed. This is consistent with the findings of Liu, Moore, et al. (2003) that speaking and listening skills were being neglected in research.

Kötter (2001) summarized the findings of studies on CMC in language learning and put them into four categories: 1) CMC provides more individual opportunities for participation than possible in a face-to-face environment; 2) CMC facilitates quicker feedback and the opportunity to save and review information; 3) CMC gives learners more time to reflect on classmates' language use and generate and/or polish their own replies; 4) CMC written exchanges benefit both those who participate actively in a dialogue as well as those who do not. White (2003) identifies interaction and participation as two key issues in language learning at a distance, stating:

> CMC has made it possible for language learners to integrate independent learning experiences with opportunities for interaction and collaboration. The crucial question now is how to arouse and maintain in distance language learners a desire to interact online. (55)

CALL applications first modeled interaction on the traditional educational paradigm of a teacher providing information. As it evolved, interaction between the learner and the program became an important feature. Functions of a CALL program and, by implication, interactions could be categorized as (1) practice, (2) tutorial, (3) simulation, and (4) utility. A great deal of the recent CALL research has explored the possibilities of CMC and its ability to facilitate access to authentic materials, opportunities for communication and availability of feedback. These three functions can be seen as interaction with content, other learners, experts (i.e. native speakers) and their instructor.

2.5 DISTANCE LEARNING

The context of this study is a community college trying to serve the needs of non-traditional students and deal with the space constraints of physical facilities. Distance Learning is already being used to meet the needs of smaller, geographically isolated schools such as in Imperial County, California, (Baker & Klawuhn, 2004). Just as it helps

bridge the opportunity gaps in those cases, it is reasonable to expect that it could likewise help ease the burdens of limited classroom space in addition to the helping meet student needs as well. Because of this additional rationale, there lies a danger of creating a distance learning system that follows the model of a mass-production assembly line with an emphasis on quantity served rather than quality of education. The distinction between a rich distance course that provides students with an equivalent learning experience as a face-to-face class and the mass production model can be a very fine line. Howard et al. (2004) offers an example of these two scenarios in which differing student perceptions of similar situations could account for very different experiences. Understanding the history, definitions and theories of distance learning is an important step in this study as interaction has been a topic of considerable interest in that field as well.

2.5.1 Historical Foundations of Distance Learning

Foreign language distance learning is indeed a significant phenomena as indicated by White's (2003) search on the International Distance Learning Course Finder which showed more than 1,300 language learning courses (out of 55,000 total distance courses). As such, it is important to include a review of distance learning in general. She describes three generations or manifestations of distance learning. The first involved one-way communication methods with long periods between contact; an example of this would be a traditional correspondence course, which was text-based and essentially ignored oral elements. In the second generation, multimedia systems were integrated into the existing print-based methods; these included technologies such as audio recordings, radio/television broadcasts and telephone communication as enhancements to the text materials. The third generation added networked systems into the mix with an emphasis on the difference between using the Internet for information distribution (which would actually be a second generation application) and using it to enable and encourage

interaction. CMC is viewed as a critical element to this latest generation of distance learning (White, 2003).

The historical approaches to distance education can be placed into three theoretical groupings. Keegan (1990), McIsaac and Gunawardena (1996) and Simonson et al (2003) all agree that the foundational theories of distance education are those of independence, industrialization and interaction/communication. The first of these focused on the independent and autonomous nature of the learner. Wedemeyer used the term "independent study" to describe distance education since the learners' environment is different from the school and while they are often guided by the teacher, the former are not dependent upon the latter (Wedemeyer, 1973). Moore, while using the term "independent learning" in the 1970's, described distance education as a system in which the learner is autonomous in deciding study objectives, methods and evaluation (Moore, 1977).

In the 1960's and early 70's Otto Peters compared distance education to industrial production from the standpoint of the institution producing learning materials. Among the categories he proposed for analyzing distance education are: division of labor in the teaching process, assembly line kind of structure in the sense that specialists are employed for each part of the project, organizational principles that save teachers and students time and effort, quality control monitored through scientific methods, standardization and others (Keegan, 1994; Peters, 1988; Simonson et al., 2003).While there are many critics of Peters' theory, his warning that distance education can be an unnatural and impersonal process (Keegan, 1990), while not as evident as he predicted it would be, is one to be carefully considered when designing distance courses and programs.

Theories of interaction and communication differ in the approach from the previous theories in that their focus is on the role of the institution in creating good learning experiences for the students rather than focusing on the independence of the student or the institution's role in creating and distributing learning materials. Bååth's work focuses on two-way communication beyond mere correcting of errors, but in linking the learning materials to existing knowledge (Bååth, 1980). Holmberg suggested that the central feature of teaching was interaction and he described the interaction between student and teacher or support staff as a "guided didactic conversation." The supporting materials developed with this theory in mind would be clear, explicit, somewhat colloquial in language, personal in style and attempt to involve the student emotionally (Holmberg, 1983, 1995). Student motivation, emotional involvement and learning pleasure were also key factors (Simonson et al., 2003).

These early theories were synthesized by Perraton (1988) to suggest that distance education could maximize educational opportunities. She proposed that anything could be taught through any medium, that there were circumstances in which distance education could expand the effective staff to student ratios and be cheaper than traditional education. She recommended that dialog in distance education needed to grow in both quantity and quality in both one-to-one as well as group discourse (Perraton, 1988; Simonson et al., 2003).

2.5.2 Towards a Definition of Distance Learning

There have been a number of definitions offered for distance learning and/or distance education. While acknowledging that there have been arguments for a distinction between those two terms, they will be used here interchangeably. Simonson et al (2003) describe the many definitions of distance learning as an evolution moving from the traditional focus on “different time” and “different place” to more recent ones that take

into account the proliferation of electronic communications to allow for the possibility of a "same time" and "different place" paradigm as well. Some of those early definitions included overly complex explanation such as "distance education is a planned and systematic activity that comprises the choice, didactic preparation and presentation of teaching materials as the well as the supervision and support of student learning and which is achieved by bridging the physical distance between student and teacher by means of at least one appropriate technical medium" (Simonson et al., 2003, 29). Others were overly simple, referring to it an educational process where the learner and teacher are separated by time and/or space (Simonson et al., 2003).

In an effort to create a workable definition that would be representative of the historical theories, Keegan provided six elements identifying distance education, but later revised them to five points (Keegan, 1990). They included:

- separation of teacher and learner
- separation of the learner from a learning group
- participation in a formal educational system
- use of media as an intermediary between learner and course content
- provisions for two-way communication

Mood (1995) refined it further by removing the reference to the learning group and added the central role of student autonomy as an encourager of interaction referring back to work by Bååth and Holmberg.

Nunan (1993) takes a slightly different approach by focusing on the central values held by those who participate in distance education. Rather than describe what it is, he prefers to list four core value positions that include: distance education is connected to political issues (i.e. social justice, increasing access to education, personal liberation, etc.); interaction processes and power relations within distance education are valuable;

instructional design is centered on the student; and there is value in the communication between participants. Holmberg (1993) also included, as a characteristic of distance education, empathy that represents the emotional involvement of the student in the learning process.

A more recent definition by Simonson, et al (2003) provides a practical glimpse of what distance learning is. Taking into account the transformation it has undergone over time, they define the current state of distance education as an "institution-based, formal education where the learning group is separated geographically, and where interactive telecommunications systems are used to connect learners, resources, and instructors" (7-8). This definition essential boils down to an identification of stakeholders (the learners, the instructor and the sponsoring institution) who, despite a geographic separation, are connected with each other and the content material through an interactive medium. In other words, interaction makes distance learning possible as it provides a bridge to link the participants despite their separation in space and time. The psychological components of that separation have come to be known as transactional distance.

2.5.3 Interaction, Transactional Distance and Immediacy

Saba (2000) reports that interaction is a common theme in distance education. One of the early applications of interaction in theory was in Moore's independence and autonomy based theory where it was a key element in the mitigation of the psychological separation resulting from the physical separation. He called this phenomenon transactional distance and interaction was vitally important to distance learning as a way to bridge that perceived gap (1989). The foundations of this theory trace back to Dewey and Bentley (1949) who provided the basis for the notion of transaction in educational circumstances. Boyd and Apps (1980) expanded the notion of educational transaction further as the interplay between individuals, the educational environment and behavior

patterns. The transactions unique to distance education involve a separation between the teachers and learners but not merely a simple geographic separation. In addition to a physical space, there exists a pedagogical phenomenon, a "psychological and communications space to be crossed, a space of potential misunderstanding between the inputs of instructor and those of the learner" (Moore, 1993b). That is how Moore defined transactional distance. Several researchers have confirmed or acknowledged the existence of this phenomenon (Chen, 2001a, 2001b; Jung, 2001; Sutton, Shannon, Small, & Gibbons, 1999). Chen (2001a) verified its existence and with a factor analysis and confirmed its components, which will later be discussed in greater detail. She also measured the effect of four variables (learner's skill in using the internet, previous experience with distance education, learner support and amount of online interaction) on that distance.

Ever since the theory of transactional distance was first purposed, interaction has provided the gauge on which that distance should be measured. In its beginnings, three kinds of interactions, learner-learner, learner-instructor and learner-content, served as the venues where transactional distance could be manifest (Moore, 1989). This theory was later expanded to include a fourth interaction: learner-interface (Hillman, Willis, & Gunawardena, 1994). Saba and Shearer (1994) reason that the amount of transaction plays a key role in the effect instruction has on the learner, and Chen (2001b) found that greater amounts of online interaction reduced the perceived transactional distance.

Using transactional distance theory as a framework, Gibby (2003) documented the kinds of interactions perceived by a student in a web-based course which confirmed the existence of the four types of interaction mentioned previously. This case study went further in depth and found that the student in question perceived sub-categories of the learner-content interaction including content-assigned (go look at a specific reference

material), content-discovered (go find something meeting a criteria) and content-created (produce something and revise it multiple times). The subject also hinted at the possibility of a fifth interaction, learner-self, which was manifest in assignments requiring significant individual reflection or deliberation either in preparation for or as a summation of an assignment. Jung (2001) proposed some further elaboration of interactions in terms of three aspects of dialogue. She suggests, and supports by citing previous research, that these added interactions include: "(1) academic interaction between learners and instructors including, external experts; (2) collaborative interaction among learners; and (3) interpersonal interaction between learners and instructors, or among learners" (531). The first interaction could be considered a sub-category of learner-instructor interaction, the second one of learner-learner interaction, and the third a sub-category of both learner-instructor and learner-learner interactions.

The concept of immediacy has also become a focus of study for some distance learning research under the umbrella of social presence. Gunawardena (1995) described social presence as "the degree to which a person is perceived as a 'real person' in mediated communication" (151). Early literature on educational telecommunications looked at this phenomenon as "a quality of the [communication] medium itself… not as an objective quality of the medium, thought it must surely be dependent upon the medium's objective qualities, but as a subjective quality of the medium" (Short, Williams, & Christie, 1976, 65-66). That is to say that social presence was not only dependent upon the qualities inherent in the communication medium, but also the users' perceptions of that given medium.

Immediacy is related to social presence as it can be described as a measure of the psychological distance the speaker puts between him or herself and the other communication partner (Wiener & Mehrabian, 1968). This is very similar to the

description of transaction distance, but the difference seems to be a measure of intent on behalf of or at least the behavior of the person communicating. Transaction distance is essentially a measure interaction, but immediacy focuses on behaviors that increase the closeness among the communication participants (Mehrabian, 1969). Anderson (1979) focused on a construct of nonverbal immediacy behaviors and she along with some other studies established a link between these behaviors and student satisfaction and learning (Hackman & Walker, 1990; Witt, Wheeless, & Allen, 2004). While the early studies focused on nonverbal behaviors, such as eye contact and smiling, Witt, Wheeless and Allen (2004) report that some scholars had acknowledged that verbal behaviors could affect immediacy as well as the nonverbal ones and that Gorham (1988) was one of the first to include them in immediacy studies. Walther (1992) noted that when nonverbal behaviors were lacking in a text-based medium, those involved compensated verbally. Immediacy as it applies to distance learning would focus then not an the interactions themselves, but rather the characteristics of those interactions.

2.5.4 Interaction and Design Issues

Other researchers have investigated and discussed other roles of interaction in distance education. In an effort to suggest a model of interactivity for software, which also has implications for distance learning, Borsook (1991) explored the nature of interaction from the point of view of human interpersonal communication refering to Senlow's features of interaction and Berlo's communicative interdependence. Senlow (1988) proposed three characteristics of interpersonal communication: the message is designed for the one receiving it; the message follows a progression dependent on feedback; there is a two-way channel of information. Berlo (1960) suggested that when two individuals communicated, their interaction was in large part an exercise in putting themselves in the others' position in order to predict behavior. Influenced by those

authors, Borsook suggested that interactivity could be manipulated in four areas: immediacy of response, non-linear information access, adapatability, and feedback. The definition of interaction as a give and take relationship is useful with the caveat that interaction should be measured on a continuum running from very low levels like watching television, to slightly higher (reading a book) to greater (driving a car) and finally to the highest levels represented by human-human interactions (Borsook, 1991, 107). Concerned with the concept of interactivity in software, Borsook concluded that the highest levels of interactivity would be found when there is a balance of learner control with computer control. While the focus here was on software interactivity, it has application to web-based distance learning because the medium for interaction is embedded in software.

Other views of interaction include those based on its purpose like Hannafin (1989) who suggested interaction be looked at it in terms of the function which could be categorized as confirmation, pacing, inquiry, navigation and elaboration. Others have suggested different purposes to interact such as Northrup who proposed that interaction was intended to access content, collaborate, converse, monitor learning or support performance (Hirumi, 2002). Bonk and Reynolds (1997) described interactions that were activity based such as critical thinking, group problems and others. Bonk and King (1998) described interactions based on the tools available such as e-mail, remote access collaboration, real-time conversation, real-time text messaging, and real-time multimedia collaboration.

Some of the earlier interaction studies often compared the effectiveness of different instructional formats such as Baere (1989) who compared a standard lecture course to courses with different combinations of audiotape, videotape and telelecture. Bauer and Rezabek (1992) compared two-way audio visual, two-way audio and

traditional face-to-face instruction. These studies along with others indicated that the medium itself had little to do with levels of interaction. Simonson et al (2003) concluded from these and other studies that interaction, while important, is not a guarantee of success and in fact forcing it can be detrimental to the learning process. The quantity of interaction was not nearly as important as the quality.

Angeli et al (2003) similarly pointed out that interaction was initially investigated with an emphasis on enabling participation. They cited Davie (1998) and Harasim (1997) who showed high levels of participation among graduate students when looking at average levels of participation. Angeli et al (2003), however, found that participation diminished over time, as did Hammond (2000), and that the quality of interaction and participation was often lacking. This is another area of research into interaction that has implications for course design. The Hammond study was of interest as it linked aspects of the communicative approach described by Widdowson (1978) to online learning outside of the language learning arena. She suggests that many communicative features can be present in messages that fuse personal dialogical messages with academic content. The implication there is that this would improve the overall quality of interaction.

Bento and Schuster (2003) proposed a taxonomy of participation with four quadrants indicating high and low levels of both interpersonal interaction and interaction with content. These two categories were synthesized by Berge (1998) from Moore's (1993a) theory transactional distance with interpersonal interaction being a composite of learner-learner and learner-instructor interactions. Table 2.2 illustrates this participation grid.

High interpersonal interaction	“social participants”	“active learners”
Low interpersonal interaction	“missing in action”	“witness learners”
	Low interaction with content	High interaction with content

Table 2.2: Bento and Schuster’s Taxonomy of Online Participation (2003, 160)

This taxonomy addresses issues of quality of interaction and illustrates that not every learner with low levels of visible interaction (interpersonal) is not learning, and not every participant who appears to have high levels of interaction is learning (Bento & Schuster, 2003).

Trentin (2002) developed a taxonomy of methodological approaches to using the web in education and training in which levels of interaction play a big role in the learning purpose. Individual learning which consisted of web browsing and the use of stand alone tutorials represented the lowest levels of interaction was classified as individual learning. Adding the element of counseling or tutoring created the category of assisted learning. Collaborative and reciprocal learning reached the highest levels of interaction. The lesson here was similar to one of those identified by Simonson et al (2003): that interaction should not be included in course design without a sense of purpose.

Rovai (2002) stresses interaction as one aspect of community in a virtual environment, along with spirit, trust and shared learning expectations and goals. His review of literature suggested seven factors that promote this sense of community and hence can be viewed as potential factors in interaction: “(a) transactional distance, (b) social presence, (c) social equality, (d) small group activities, (e) group facilitation, (f) teaching style and learning stage, and (g) community size” (12).

The trends in studying interaction clearly have taken a turn towards quality of rather than just quantity of interaction, but the definition of quality interaction is still a

moving target. Research in distance learning has provided categories of interactions (learner-learner, learner-instructor, learner-content, learner-interface and possibly learner-self). It has also suggested purpose for interaction which are similar to those proposed by CALL and CMC research: 1) accessing content, 2) communicating and collaborating, and 3) monitoring and supporting learning. Another important idea is that of measuring interaction along a continuum with a one-way transfer of information representing one end of the continuum and unfettered multi-channel communication on the other end.

2.6 INTERACTIONS FOR WEB-BASED FOREIGN LANGUAGE LEARNING

In summary, research in each of these areas within the framework of web-based FLL has provided insights into the importance and role of interaction in FLL. The area of Foreign Language Learning suggests that one focus of study regarding interaction be their purpose: about the language, about the message and about the task. Also, it would be important to focus on instructor-class, instructor-group, instructor-student (with or without the class observing) and student-student. The interactions can also fall under the categories of convergent interactions that allow for individual participants to have more turns participating or divergent interactions that allow for fewer turns but more complex language usage.

Research in Second Language Acquisition suggests that interaction should be studied as an input source of the target language and a way for individuals to join a larger community. In addition it also suggests interaction may indeed be the learning process itself as it provides the opportunity for the language learner to generate, test and receive feedback on developing language rules. This field also points out the importance of examining the interaction between the individual and learning situation.

Studies in Computer-assisted Language Learning identified different levels of interaction along a continuum with direct instruction (computer controlled, same format

for every learner) on one end and completely learner-controlled on the other end. Kinds of interaction could include practicing, tutoring, problem solving or utility such as receiving feedback. The purpose of interaction is to access to authentic materials, provide opportunities to communicate and make timely feedback available.

Distance Learning research suggests that there are collaborative and interpersonal interactions between learners, and academic and interpersonal ones between learner and instructor. There are also interactions between the learner and content provided by the instructor and discovered or created by the learner and between the learner and the technology itself (interface). There may also be a level of interaction between the learner and him or herself as well. Similar to the continuum identified in CALL is that suggested by DL: one-way transmission of information at one extreme and interaction that adapts to individual learners based on feedback to a true two-way channel on the other end. Also like CALL the function of interaction can be seen as accessing content, providing collaborative and communicative opportunities as well as monitoring and supporting learners.

Based on the review of research of interaction in FLL, I have identified the following questions to extend and build on our body of knowledge of interaction in an online foreign language learning environment.

1. What is the effectiveness of the available interactions in a web-based Spanish course as perceived by community college foreign language learners?
    - Which of these online interactions do students perceive as most beneficial to learning a foreign language and which ones do they perceive as least effective? Why?
    - To what extent do the students participate in the interactions linked to their grades?

- To what extent do the students participate in optional interactions not related to their grades?

2. How do the different interactions work together to facilitate learning in an online foreign language learning environment based upon their purpose?
   - What do community college students perceive is the role of the interactions suggested by FLL research (about the language, about the message and about the tasks) in online foreign language learning?
   - What do community college students perceive is the role of the interactions suggested by SLA research (a source of input, a way to test internalized language rules and a method of integration into a community) in online foreign language learning?
   - What do community college students perceive is the role of the interactions suggested by DL (access to authentic material, opportunity for communication and/or collaboration and access to feedback and support) in online foreign language learning?
   - What do community college students perceive is the role of the different modes of interactions along the continuum from one-way direct instruction to two-way synchronous channels as suggested in CALL and DL in online foreign language learning?
3. How do the different interactions work together to facilitate learning in an online foreign language learning environment based upon with whom or what the student is interacting?
   - What do community college students perceive is the role of the interactions suggested by FLL research (teacher-class, teacher-group, teacher-student and student-student) in online foreign language learning?

- What do community college students perceive is the role of the interactions suggested by SLA research (non-native speaker with native speaker and non-native speaker with non-native speaker) in online foreign language learning?
- What do community college students perceive is the role of the interactions suggested by as suggested by DL (learner-learner, learner-instructor, learner-content and learner-interface) in online foreign language learning?

Chapter 3: Methodology

3.1 Restating the Questions

Within the confines of Blackboard, one of the most common web-based course delivery systems, there are a variety of interactions possible depending on how the course is designed. The course that was the focus of this study will be described at length in this section and the different interactions identified. The following questions about student perceptions of those interactions are the object of this study.

1. What is the effectiveness of the available interactions in a web-based Spanish course as perceived by community college foreign language learners?
   - Which of these online interactions do students perceive as most beneficial to learning a foreign language and which ones do they perceive as least effective? Why?
   - To what extent do the students participate in the interactions linked to their grades?
   - To what extent do the students participate in optional interactions not related to their grades?
2. How do the different interactions work together to facilitate learning in an online foreign language learning environment based upon their purpose?
   - What do community college students perceive is the role of the interactions suggested by FLL research (about the language, about the message and about the tasks) in online foreign language learning?
   - What do community college students perceive is the role of the interactions suggested by SLA research (a source of input, a way to test internalized

language rules and a method of integration into a community) in online foreign language learning?

- What do community college students perceive is the role of the interactions suggested by and DL (access to authentic material, opportunity for communication and/or collaboration and access to feedback and support) in online foreign language learning?
- What do community college students perceive is the role of the different modes of interactions along the continuum from one-way direct instruction to two-way synchronous channels as suggested in CALL and DL in online foreign language learning?

3. How do the different interactions work together to facilitate learning in an online foreign language learning environment based upon with whom or what the student is interacting?
    - What do community college students perceive is the role of the interactions suggested by FLL research (teacher-class, teacher-group, teacher-student and student-student) in online foreign language learning?
    - What do community college students perceive is the role of the interactions suggested by SLA research (non-native speaker with native speaker and non-native speaker with non-native speaker) in online foreign language learning?
    - What do community college students perceive is the role of the interactions suggested by DL (learner-learner, learner-instructor, learner-content and learner-interface) in online foreign language learning?

This chapter will discuss how to answer these questions. It will address methodological issues of sampling, how data was collected and analyzed and a description of the online environment being studied.

3.2 SAMPLING AND PARTICIPANTS

Since the purpose of this study was to present individual cases and build theory from them, it took advantage of qualitative methods of data collection, analysis and interpretation. Strauss and Corbin (1998) refer to sampling for this kind of study as "theoretical sampling" and define it as:

> Data gathering driven by concepts derived from the evolving theory and based on the concept of "making comparisons," whose purpose is to go to places, people, or events that will maximize opportunities to discover variations among concepts and to densify categories in terms of their properties and dimensions. (1998, 201)

They suggest the initial considerations include what group or place would be likely to provide relevant data, what kind of data to collect and perhaps how long to continue the study if the object of research is a developing process. Along this same reasoning is what Patton (1990) calls purposeful sampling in which the researcher selects "information-rich cases" where the phenomena are most likely to occur. As this study will be examining multiple cases, it will be useful to understand the nature of the individual cases. While the sampling will not actively seek specific kinds of cases, it is important to note what kind of cases are depicted as that will play a role in the what conclusions can be drawn. Patton (1990) provides several examples of these different "information-rich cases," which I have compiled into table 3.1. In addition to purposeful sampling, Berg (2001) discussed convenience sampling in which the researcher relies on available subjects who are likely to provide data regarding the phenomena being studied.

Sampling strategy	Characteristics	Example[2]
Extreme or deviant case	Cases are unique or special in some aspect.	A study on domestic abuse cases resulting in a death.
Intensity	While not extreme, cases strongly manifest the phenomena.	A heuristic study on personal experiences with loneliness.
Maximum variation	Cases are selected to create as much heterogeneity as possible in order to get a wide perspective.	A study of parental involvement in elementary school with cases from all socio-economic classes, all ethnic groups, single-parent households, etc.
Homogeneous	Cases belong to a specific subgroup of a larger community.	A focus group of single-parent female heads of household.
Typical case	Cases are chosen to demonstrate the "average" experience, random selection may be used among several cases meeting the criteria.	A study of community development in a Third World country to determine key issues for similar villages.
Stratified (but not random)	Less than maximum variation, cases are chosen to yield above average, average and below average groups.	A study detailing the study habits of "A" students, "C"students and failing students.
Critical case	Cases are dramatic and likely to be logically (although not statistically) generalizable.	Comparing the falling speed of a feather and a coin inside a vaccum (if they fall at the same rate, then it is logical the principle would apply in all cases).

Table 3.1: Sampling strategies, their characteristics and examples.

Convenience sampling played a large role in this study since the participant pool was comprised of students enrolled in the second semester of a first year Spanish courses at a large community college in a major Southwestern city. This included students from the course I taught as well as those taught by others at the college in question. The

[2] Maximum variation and stratified sampling examples are original while the other examples were provided by Patton.

interviews were conducted after the end of the semester so that students would not feel any connection between their participation in the study and their grades in the class. Potential participants were not even contacted until after grades had been submitted. At the time students were approached for informed consent, they were told that I was not scheduled to teach any of the Spanish 3 or 4 courses in the next semester. This way they could be able to participate without any concern for how their responses might potentially affect any future Spanish courses they take. An effort was made to include students who dropped the course during the semester, as they might be able to provide relevant information that someone who completed the course would not (for example they could potentially inform the study about interactions that hindered their learning or that were missing from the course to the degree that they withdrew from the course), however none of them responded to the initial contact email.

The purpose of these procedures was to make sure that participant knowledge about the study and its focus did not alter their perceptions of the available interactions during the course. One other potential source of influence that could affect student perceptions would be the emphasis placed upon interaction by the instructor. Brief, informal conversations with the other instructors determined that all of the instructors considered interaction to be an important part of the learning process but did not directly discuss the term interaction with their students. Interaction was promoted by encouraging students to complete and keep up with their assignments and sending email inquiries regarding their progress in the course.

A review of relevant literature has indicated that there are many factors that may have an impact on interaction. I have selected as helpful in analyzing individual student experience the factors of previous computer experience, previous experience with courses including a web component, computer access and connectivity, previous language

experience and demographic information. This information also helped in determining what kind of a case individuals represented. For example, several participants were classified as heritage speakers, and as such their experience differed in some ways from that of participants who did not begin with that same level of proficiency.

Previous computer experience: This has been a factor of many studies in CALL. Chen (2001a) investigated it as a possible factor in transactional distance. This can be measured in a number of ways including self-reporting skill levels or the various kinds of tasks the user can perform such as web-surfing, emailing, web-page creation, word processing, etc. Students were asked what level of internet experience they have had: 1) non-user; 2) novice—works with email, surfs the web; 3) advanced—uses internet for research and/or simple financial transactions (i.e. pays bills, makes online purchases, etc.), creates and maintains a personal web page; 4) expert—uses internet for complex financial transactions (i.e. runs a business, trades stocks, etc.) creates and maintains more complicated websites. They were also given the option of rating themselves between two levels. Students were also asked to describe their other computer experience, i.e. word processing, digital imaging, spreadsheet use, etc.

Previous experience with courses including a web component: Participants will be asked what kind of courses with internet involvement (based on Boettcher's 1999 list) they have had: 1) web presence—syllabus and other general information on web; 2) web-enhanced—some material distributed through the web; 3) web-centric—web involvement equal to the face-to-face aspect; 4) web course—does not require any face-to-face contact.

Computer access and connectivity: A factor often neglected in many CALL studies is learner access to necessary hardware. Many studies provide the necessary equipment to participants as part of the study treatment however, in the case of distance

learning the equipment used by learners can be extremely varied. Operating system platforms (PC or Mac) and web browsers as well as software versions could potentially have played a role in what features a learner might have been able to access. Other considerations also included peripheral equipment like microphones and speakers for speaking and listening practice, bandwidth limitations and even where the learner has access (at home, at a friend or relative's home, at work, on campus, etc.). Common sense informs us that such things may also impact learner choices with regards to technology use.

Previous language experience: Any teacher stepping into a beginning Spanish class on the first day is almost immediately confronted with the challenge of a wide variety of prior experience in the language. It is not uncommon to have a full spectrum of learners ranging from those with no previous experience with the language, all the way up to native and heritage speakers (heritage speakers spoke Spanish at home, but did not receive Spanish instruction in school).

Demographic factors: Data such as age, gender, ethnicity and socio-economic class are routinely collected in research and while many studies, like that of Grace (2000), conclude there are no gender differences in CALL effectiveness, others, like that of Bugel and Buunk (1996), indicate that differences that do exist result from factors such as learner interests and prior knowledge rather than any innate gender differences. Collecting this information contributed to a more complete picture of the individual participants and their unique experiences that helped in understanding the sample on a deeper level.

3.3 QUALITATIVE RESEARCH AND GROUNDED THEORY

This was a study focusing on student perceptions of interactions in order to gain a deeper level of understanding as to how different interactions actually contribute to the

learning, and as such it was appropriate to use qualitative methods. Strauss and Corbin state, "qualitative methods can be used to obtain the intricate details about phenomena such as feelings, thought processes, and emotions that are difficult to extract or learn about through more conventional research methods" (Strauss & Corbin, 1998, 11). One of the criticisms of the role interaction in SLA theory was that it was largely seen as a "black box" from which language learning emerged without really explaining how (G. Cook, 1982). Qualitative methods can help open that black box, and more specifically, the procedures and techniques involved in Grounded Theory.

Strauss and Corbin (1998) describe Grounded Theory as "theory that was derived from data, systematically gathered and analyzed through the research process" (12). That is to say that the researcher does not start with a hypothesis or preconceived theory, although they note that Grounded Theory methods can also be used to elaborate existing theory. As such this was a good match for this study since I am looking at existing theory in four different fields and extending it into a new area.

3.3.1 Data Collection

As opposed to quantitative research, the validity and reliability of which can be established by adherence to proper statistical procedures, qualitative research gains the readers' trust by including enough detail so as to make the researchers conclusions reasonable (Firestone, 1987). The length and depth of the interviews also strengthen the trustworthiness of the study. There are other techniques that can be employed to strengthen the trustworthiness of qualitative research including the use of member checks, long-term or repeated observation and peer review during the analysis phase (Merrian 1998).

The method of data collection employed was that of in-depth interviews. Volunteer participants were solicited from four sections of second semester Spanish

taught entirely online at the community college in question. These interviews were conducted after the final grades for the course had been submitted. They were conducted following a protocol of open-ended questions (see appendix A) designed to reveal the students' perceptions of the how and why different interactions contributed to learning. As the questions refered to specific interactions within the course, their rationale will be explained in the course description. They involved inquiries into the participants' experience with the interaction in question and how it facilitated learning. Background information was also be collected at this time with a written survey (see appendix B) and additional questions were used to elicit more in depth information. The interviews were recorded transcribed and analyzed.

3.3.2 Coding and Data Analysis Theory

Berg (2001) states that data analysis consists of three data processes: reduction, display and conclusion drawing and verification. Reduction means that the raw data from all these sources needs to be condensed and focused into usable elements. Display refers to the organization of the data to facilitate understanding and interpreting it. Conclusion drawing here refers to the process of identifying emerging themes, and it occurs throughout the analysis process. These themes are tentative and are subject to change as the research continues. Eventually, they are either supported and verified by the data or undermined and discarded. This verification also involves the researcher rechecking the path to those conclusions as well as the procedures used to arrive at those conclusions in order to make sure that personal biases and/or expectations are not interfering with the conclusions.

In Grounded Theory, coding plays the primary role in this process of describing properties, categorizing and identifying themes. Strauss and Corbin (1998) describe a variety of coding options: open coding, axial coding and selective coding, and all of these

coding tools will be employed when appropriate. Open coding is defined as "The analytical process through which concepts are identified and their properties and dimensions are discovered in data" (Strauss & Corbin, 1998, 101). The units of analysis are concepts that represent discrete units that can then be compared with others and grouped into categories based upon similarities. They also describe some different ways of open coding that focus on analyzing at different levels of the data, including line-by-line, whole sentence or paragraph and finally whole document. Line-by-line is the most thorough and quickly generates categories and as such is an effective start to data analysis. Whole sentence or paragraph analysis is particularly useful when the researcher has established several categories and has decided to focus specifically on those. Whole document (in this case an entire interview transcript) analysis is good for exploring what distinguishes one document from another. This helps identify similarities and differences that might not have been identified previously.

In contrast, axial coding is "the process of relating categories to their subcategories, termed 'axial' because coding occurs around the axis of a category, linking categories at the level of properties and dimensions" (Strauss & Corbin, 1998, 123). In this process related categories that may have become disconnected during open coding are rejoined. Here relationships are established between categories and subcategories building an infrastructure for the theory. Taking the dimensions and properties of categories as established during open coding, the researcher searches for cues in the data that indicate how the different categories and subcategories are structured.

Selective coding is "the process of integrating and refining the theory" (Strauss & Corbin, 1998, 143). This refining occurs by removing superfluous categories and filling gaps in poorly described categories. A storyline memo is a narrative of the phenomena being studied that uses the categories and links provided in the previous coding process.

This storyline can then be reviewed for consistency and logic and where that is lacking, the researcher can return to the data to fill in the gaps.

3.3.3 Coding and Analysis in Practice

Interviews were digitally recorded and then transcribed later. Once the transcription was completed, an individual case was started by taking notes from their background questionnaire. The transcripts were then examined for information regarding the participant's motivation for taking Spanish and for taking it in an online format. Since all the participants indicated that the announcements made significant contributions to their learning, the transcripts were then coded for the participant's perceptions about announcements. After those, the transcripts were coded for perceptions about discussion boards as that also seemed to be data rich area as well. Notes were taken regarding the order in which they did their assignments. From there, the transcripts were coded for perceptions of the different interactions available through the different assignments. Finally, the transcript was coded for comments related to the participant's general experience in the course. From all of that information a storyline memo was created for each participant.

Once individual cases were described for all ten participants, then notes were taken regarding themes that had begun to stand out. For example, from reading the transcripts it became clear that feedback from their instructor was important, so the transcripts were then coded for perceptions on instructor feedback. This process was repeated with other potential themes. In some cases, the potential themes did not consistently appear or address the questions of this study and they were set aside as notes of interests as possible inclusion as topics for future research. For example, one participant implied that one kind of interaction was actually harmful to her learning, and she avoided it. Since it was an isolated experience, it could not be considered a theme;

however, further research into that specific kind of interaction could reveal whether or not there are circumstances in which that kind of interaction interferes with learning. Finally, the research questions were restated and answered according to the themes extracted from the data.

3.4 Online Environment Description

The four web courses, while taught by different instructors, shared an over-arching structure in Blackboard. A variety of assignment formats were available to facilitate skill development in the areas of reading comprehension, listening comprehension, writing (including grammar), speaking, and cultural knowledge. As the student logged into the course, a personalized index page (see fig. 3.1) appeared listing the courses in which they are enrolled along with some tools. Clicking a link in the "My Courses" area, provided access to the class.

Figure 3.1: Personalized index page

3.4.1 Announcements and Discussion Boards

The course in Blackboard was set to open to the announcements page (see fig. 3.2) where the students find messages posted by the professor. These announcements constituted an asynchronous interaction with the instructor. From a design standpoint these were interactions initiated by the instructor to the class, however due to their

separation from other learners the students might perceive this as an interaction between the instructor and them as an individual. In the case of general tips about the language that were not prompted by student questions, an announcement might also be perceived as interaction between learner and content. Depending upon the substance of the announcement, the purpose behind the interaction was to provide support or feedback to the learners or providing access to content. It would be one-way transmission of information unless the message was a response to questions or other learner input sent to or posted for the instructor or if the student contacted the instructor in response to the announcement. Study participants were asked to discuss the frequency with which they checked the announcements, what kinds of announcements they noticed and how they contributed to their learning (see appendix A, set 1).

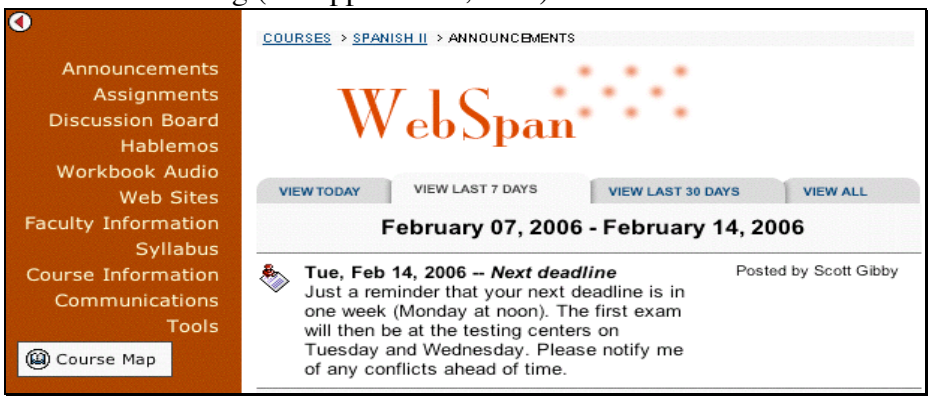

Figure 3.2: Announcements page inside course

In addition to emailing the instructor directly, one of the ways for the student to communicate with the instructor and other students was by posting to the "Questions" discussion board (see fig. 3.3). Discussion boards can be accessed from the menu area on the left side of the screen in figure 3.2. The messages posted in the discussion boards are asynchronous and threaded, so students can reply to others or start a new series of messages. The interactions here could be between learners and other learners or the instructor for the purpose of support. That support could be for instructional or

technology-related issues. Because of the public nature of these postings, this is an area where there is likely to be interactions that other learners may observe but not participate in themselves. Students were asked to discuss how often they looked at and posted to the questions forum. They were also asked about what benefits they found from their own postings as well as from reading those of others (see appendix A, set 2).

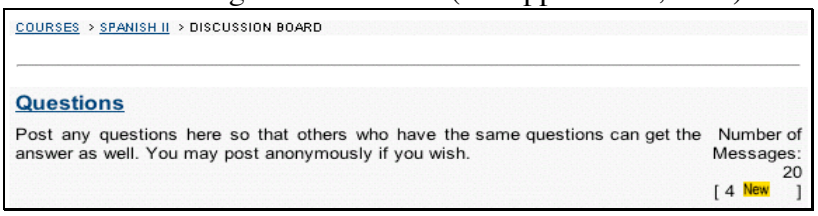

Figure 3.3: "Questions" forum in discussion board

Other forums in the discussion board include forums where students sign up for an interview time for one of the three online audio chats with the instructor, indicate their preference of testing centers where they will take their written exams, an introductions forum in which they post an initial message introducing themselves to the instructor and other students and one in which they can post their availability for Spanish audio chats with other students. These forums constitute interactions with the instructor or other students and are interactions about tasks. Participants will also be asked about their experience with these organizational forums (see appendix A, set 3) to find out how they affected their learning.

The online assignments are organized in modules that correspond to chapters in the textbook. Each module identifies the pages of the text that are covered and gives a deadline with instructions for submitting workbook pages by campus or regular mail. Figure 3.4 is an example.

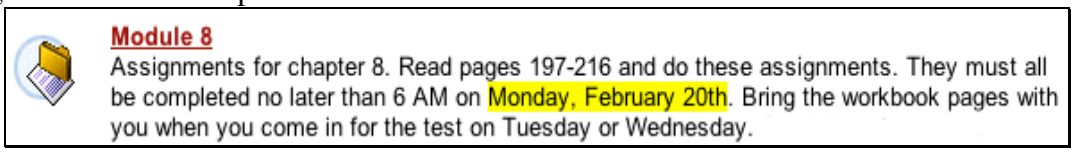

Figure 3.4: Module folder

Within the module folders are links to content and three categories of assignments: forum postings, speaking assignments and Blackboard assessments (see fig. 3.5 for an example of a module). Participants were asked about how they approached the modules, the order in which they did the assignments and why they decided upon that order (see appendix A, set 4).

Tutorials
Review the tutorials at:

http://www.austincc.edu/sgibby/WebSpan2/tutorials/8_1.html
http://www.austincc.edu/sgibby/WebSpan2/tutorials/8_2.html
http://www.austincc.edu/sgibby/WebSpan2/tutorials/8_3.html
http://www.austincc.edu/sgibby/WebSpan2/tutorials/8_4.html
http://www.austincc.edu/sgibby/WebSpan2/tutorials/8_5.html

Cultura 8
Visit one of the following websites about Cuba. In the "Cultura" folder post something you found interesting that you didn't know before.

http://www.cubaweb.cu
http://www.countryreports.org/cuba.htm
http://www.cubanculture.com/

Value: 1 point

Workbook (on line)
In the "Workbook" forum post 3 things"
1) part D from page 154
2) paso 2 of part A from pages 158-159
3) the "Mi diario" exercise

Value: 6 points

Workbook (written)
Complete and correct in a different color pen or pencil the other workbook assignments from pages 145-160. Bring them to my office when you come for the interview or test.

Value: 7 points

Reflections
What have you learned this module? What can you do now that you couldn't before? What do you still need to work on before taking the test? Which assignments helped the most? Which ones felt like a waste of time (partial or complete)?

Post your responses to these questions in the reflections folder. You may post anonymously if you want.

práctica 8.1
Using the emphatic form. Check tutorial Check tutorial 8.1 for help.

Value: 1 point

práctica 8.2
Working with irregular verbs in the preterite tense. Check tutorial 8.2 for help.

Value: 2 points

práctica 8.3
Do you know what verbs have a different meaning in the preterite? Check tutorial 8.3 for help.

Value: 2 points

práctica 8.4
This exercise works with stem-changing verbs in the preterite. Check tutorial 8.4 for help.

Value: 2 points

práctica 8.5
This works on using both direct and indirect object pronouns in the same sentence. Check tutorial 8.5 for help.

Value: 3.5 points

Leamos 8
Read the passage about a hispanic holiday using cognates and recent vocabulary to understand it.

Value: 3 points

Escuchemos 8
Listen to the passage about someone's favorite holiday.

Value: 4 points

Practice quiz
Go here for some practice quizzes to make sure you are ready for the "práctica" exercises.

Hablemos 8: fiestas
Reply to a message from your professor or one of your classmates. (1) Answer the question about how you celebrate the holiday mentioned in the question. Be sure to use the preterite tense. (2) If different from the holiday asked about, tell us what your favorite holiday is and how you celebrate. If your favorite holiday is the same one asked about, then pick another holiday you like and tell us about how you celebrate. (3) Finally, ask what someone does or how the celebrate another holiday (see pages 198-199 for a list).

Chat 8
Talk about the different holidays. Include:

1) which holidays you celebrate
2) your favorite holiday
3) who you celebrate with and what you do
4) your favorite holiday when you were very young
5) where you went and did

Value: 3 point

Video 8
Watch and listen in on the family gathering.

Figure 3.5: Module assignments

3.4.2 Tutorials

Much of the online content came in the form of web tutorials for which there are links within the module folder. The tutorials are structured with a title followed by two objectives (see fig. 3.6). The first is a performance objective that represents what learners should be able to do when they have mastered the content. The second is an understanding objective that represents an ability to explain important elements about the grammar to others thus illustrating a deeper knowledge. After the objectives are some questions for the learners to think about and answer while studying.

TUTORIAL 8.2: IRREGULARS IN THE PRETERITE

Objectives:

Discuss a series of events in the past, using a variety of both regular and irregular verbs.

Explain how irregular verbs can be grouped together by their similarities so they are easier to remember.

Guiding Questions:

Consider the following questions while studying the content:

Where do the new endings for all these irregular verbs come from?

How are **decir** and **traer** different from the other verbs?

Figure 3.6: Tutorial introduction with objectives and guiding questions

Once the guiding questions have been introduced then the actual instruction is presented. This section is referred to as the preparation (see fig. 3.7). Within the preparation section the students are first directed where to read the explanation of the specific grammar point in the textbook. The tutorial continues with distinct presentation of that same grammar providing the students with different explanations and examples. There may also be links to previous tutorials that presented relevant material that can be reviewed.

Preparation:

Please read pages 203.204 in your textbook before working with the tutorial.

A certain number of verbs in the preterite are so irregular that they have their own special category. These include:

hacer*	andar	poder	decir
querer	estar	poner	traer
venir	tener	saber	

* We have seen **hacer** before in tutorial 7.5 (active link to previous tutorial)

These verbs share a common set of endings that is different from but has similarities to both **AR** endings and **ER/IR** endings. The stems are radically different from the infinitives. They can be divided into 4 groups and some people find it easier to remember them this way. The following animation shows you their stems and how to conjugate. Take a close look at **decir** and **traer**; there is something slightly different about them.

Figure 3.7: Preparation – grammar explanation

This particular tutorial also included the following interactive shockwave movie in which students can select one of the irregular verbs (fig. 3.8) and be shown the stem (fig. 3.9).

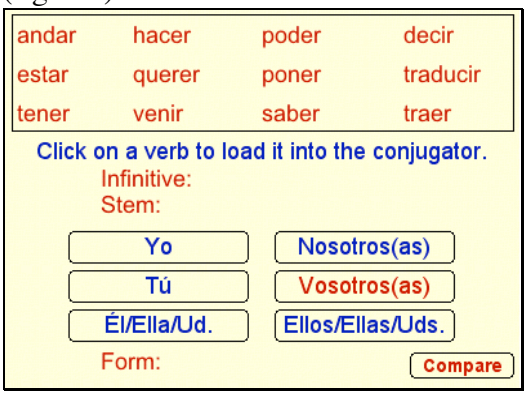

Figure 3.8: Waiting for verb selection

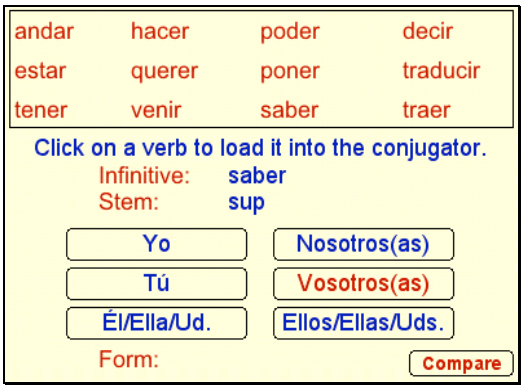

Figure 3.9: Verb selected, waiting for subject

Once students have picked a verb, they can then click on one of the subject buttons in order to see what the final form should be (fig. 3.10). The "compare" button allows three verbs to be selected and shown side by side in all of their forms (fig. 3.11). This feature is optional and students could elect not to take advantage of it.

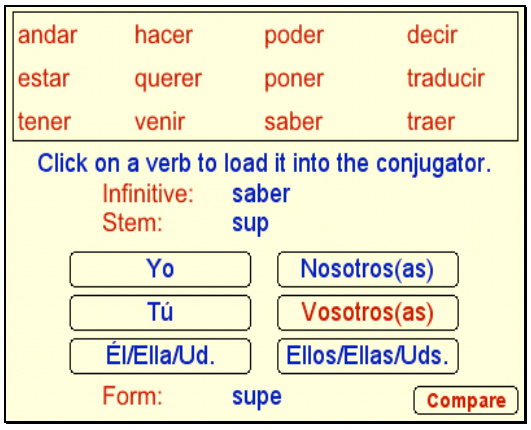

Figure 3.10: Form shown after subject selection

Figure 3.11: Comparison of 3 verbs

After the preparation, the final section is called "A Step Ahead" (see fig. 3.12) and it presents questions to help make connections between this grammar point and others. Students are informed that they do not need to answer the questions posed here, rather it is information to expand upon the material already presented or prepare them for future grammar items.

A Step Ahead:

The Spanish verb **hay** actually comes from the infinitive **haber**. If you wanted to use the equivalent of **hay** in the preterite, what would that be? Note that **haber** is like the other verbs in this tutorial and has an irregular stem of **hub-**, but what subject form would you use?

Figure 3.12: A step ahead

There are 30 tutorials in the second semester course and 11 have the shockwave feature. The level of interactivity in these shockwave elements vary. This one, for instance, gives the learner some control over what and how many examples are shown. Figures 3.13 and 3.14 illustrate an example of a shockwave feature that animates the changes necessary to convert one grammar structure to another. Figures 3.15, 3.16, 3.17 and 3.18 walk the learner through a sentence construction and then allow him or her to alter elements. These are likely to be perceived as an interaction between learner and content for the purpose of practice and tutoring. The tutorials without the shockwave

feature would be a one-way transmission of information that could also be an interaction between the learner and content but just for the purpose of accessing content.

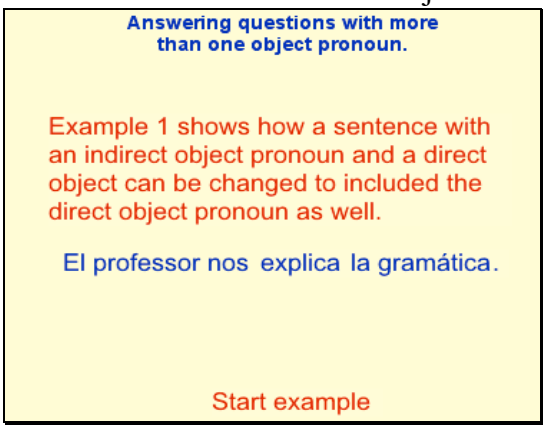

Figure 3.13: Student initiation of example

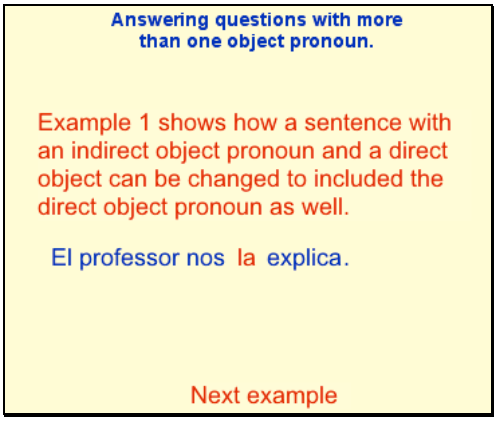

Figure 3.14: Completed example

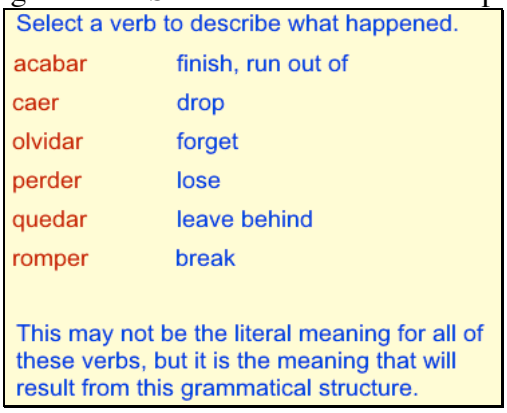

Figure 3.15: Selecting verb for example

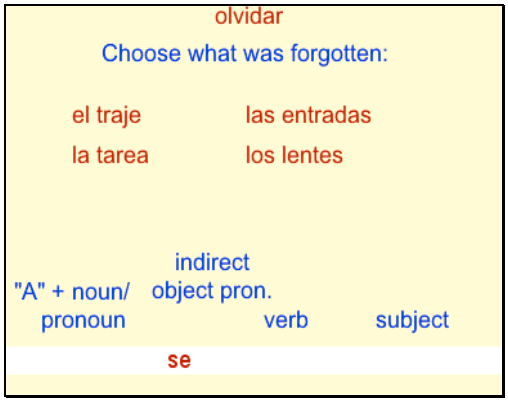

Figure 3.16: Selecting the subject

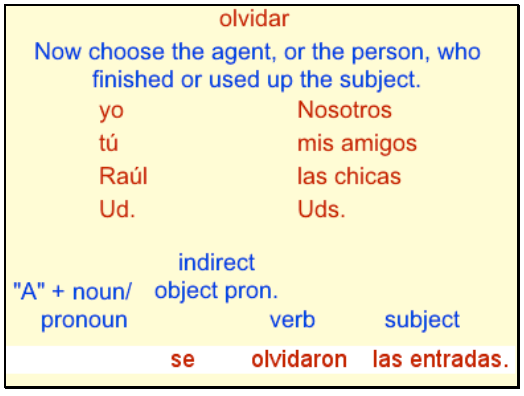

Figure 3.17: Partial sentence structure

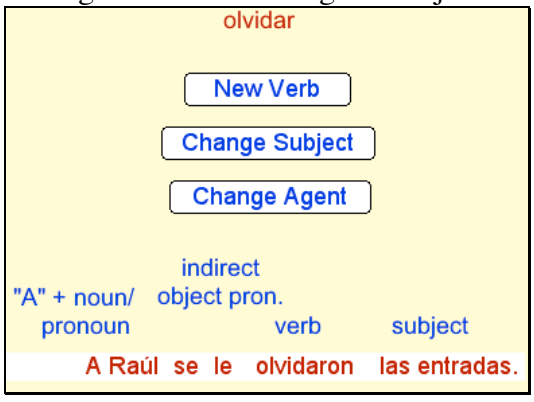

Figure 3.18: Completed sentence structure

It should be noted that there is nothing that forces the students to visit the web tutorials. While they are a resource to help guide students through new grammar concepts, they are optional as there is no specific credit given for visiting these sites. After reading the chapter in their textbook, students could conceivably bypass the tutorials and go straight into the assessments. In that sense, the tutorials may be viewed as a learner initiated interaction. Participants were asked about when they visited the tutorials and how much time they spent with them as well as how each part of the tutorial contributed to their learning. They were also asked to give examples of tutorials that helped and others that were not effective and what differences there were between them (see appendix A, set 5).

3.4.2 Discussion Boards Assignments

As noted earlier, the actual graded assignments include discussion board postings, speaking assignments and Blackboard assessments. The discussion boards dedicated to assignments include forums for posting **cultura** and workbook assignments as well as optional reflections.

Cultura

The forum assignments included posting cultural information they found on the web about Spanish-speaking countries. Each module directs them to some sites about the country or countries presented in the corresponding chapter of their textbook. Figure 3.19 is an example of a **cultura** posting. Participants were asked how much time they spend browsing the website the assignment directed them to as well as how many of them they visited before composing the **cultura** posting. They were also asked how often they read the postings of other students and how these things contributed to their learning (see appendix A, set 6).

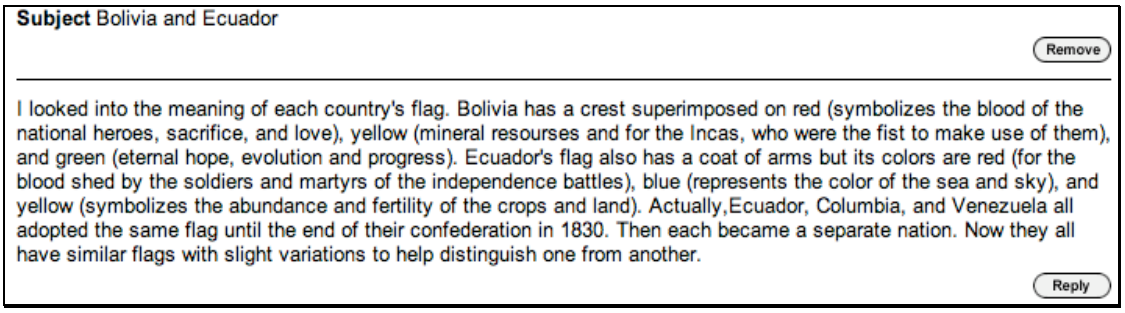

Figure 3.19: Culture posting to discussion board

Workbook Assignments

The other forum posting is reserved for specific assignments from the workbook. While the workbook does have an answer key for students to check their work, there are some open-ended items or paragraph writing exercises that cannot be checked in that fashion. Those assignments were posted in a forum (see figure 3.20) and the instructor then responded to those posts with detailed feedback about errors. The posting itself and subsequent reply from the instructor represents interaction with the instructor for support and feedback, but students might also perceive the workbook assignments themselves as interaction with content. Participants were asked about how the workbook contributed to their learning and how they used it (see appendix A, set 7).

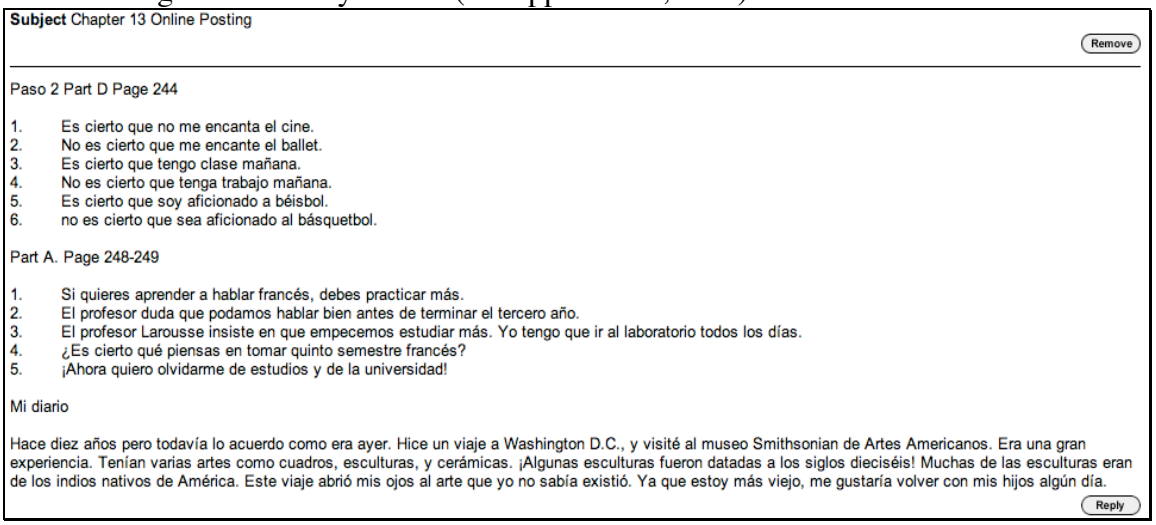

Figure 3.20: Posting of workbook exercises

Reflections

Students were encouraged to post a reflection at the end of each module. This element of the course was included primarily as a way to get feedback about the course and each module. As with the **pruebas de práctica** there were no points attached to the assignment and so in the past not every student has chosen to leave a reflection (see figure 3.21 for an example). This represents an interaction between the learner and instructor for the purpose of support and perhaps an interaction between the learner and him or herself. Participants were asked how often they post reflections, why they chose to post them and the content of those reflections. They were also asked how often they read other learners' reflections and how the reflections contributed to their learning (see appendix A, set 15).

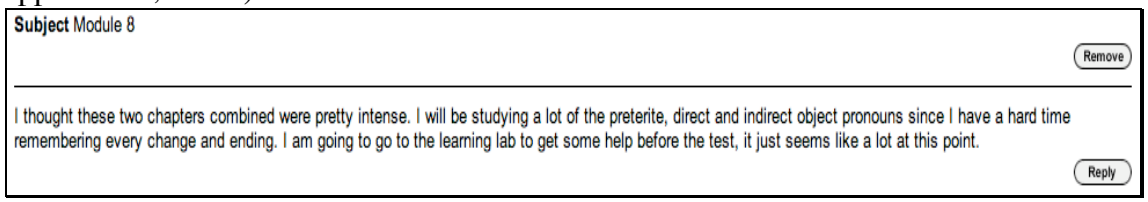

Figure 3.21: Reflection posted by a student

3.4.3 Speaking assignments

There were two kinds of speaking assignments, **hablemos** that is asynchronous and **chat** that is synchronous.

Hablemos

The speaking assignments take advantage of technology provided by Horizon Wimba. There are two different kinds of these assignments. The first, called **Hablemos**, are asynchronous vocabulary-based messages. In these discussion boards, students post an audio message topically related to the new vocabulary for the chapter. There is a checklist of elements to include (see fig. 3.22).

Las fiestas
Reply to a message from your professor or one of your classmates. (1) Answer the question about how you celebrate the holiday mentioned in the question. Be sure to use the preterite tense. (2) If different from the holiday asked about, tell us what your favorite holiday is and how you celebrate. If your favorite holiday is the same one asked about, then pick another holiday you like and tell us about how you celebrate. (3) Finally, ask what someone else does or how they celebrate another holiday (see pages 198-199 for a list).

Figure 3.22: Instructions for "Hablemos" assignment

Hablemos assignments were posted on a message board (see fig. 3.23) using a microphone connected to their computer. Other students and the instructor have access to these messages making interaction possible. These could be interactions between the learner and instructor or other learners. Their purpose is communication, and they are interactions in which the focus is the message and understanding or being understood. Its similarity to a monologue allows the learner a longer utterance of greater complexity. Participants were asked about how they prepared for this assignment and what issues or problems they might have encountered recording their responses. They were also asked how often they listened to other student's messages and how that affected their learning (see appendix A, set 8).

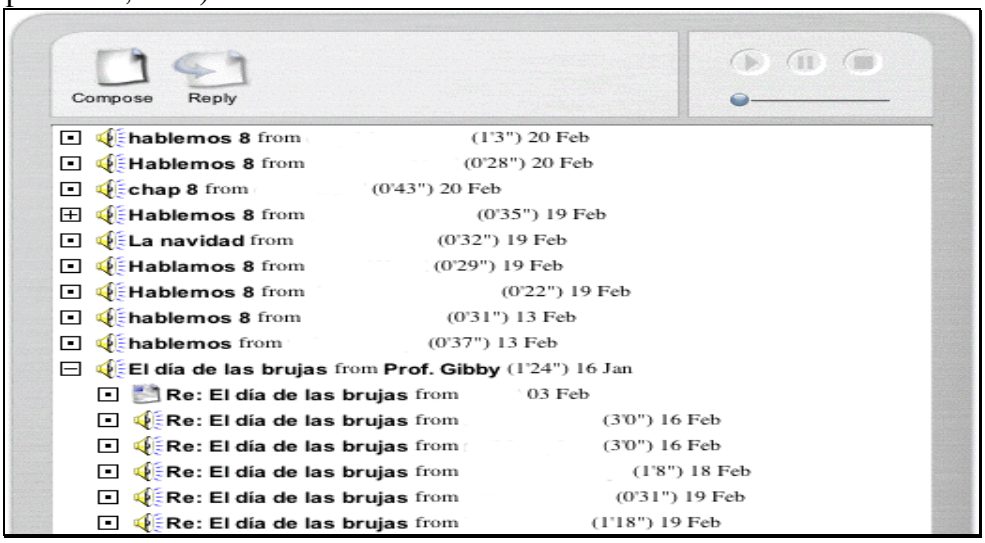

Figure 3.23: Messages posted to audio message board

Chat

The second kind of speaking assignment is a live audio chat for which they are given bullet points to discuss with other students in Spanish (see fig. 3.24). The audio transmissions are archived for later review by the instructor. Each entry stored by date and time and is identified by the name of the participant (see fig. 3.25 & 3.26). The length of the audio file is also indicated in minutes and seconds. The students set up these chats amongst themselves, and typically there were only two or three students participating in any given chat.

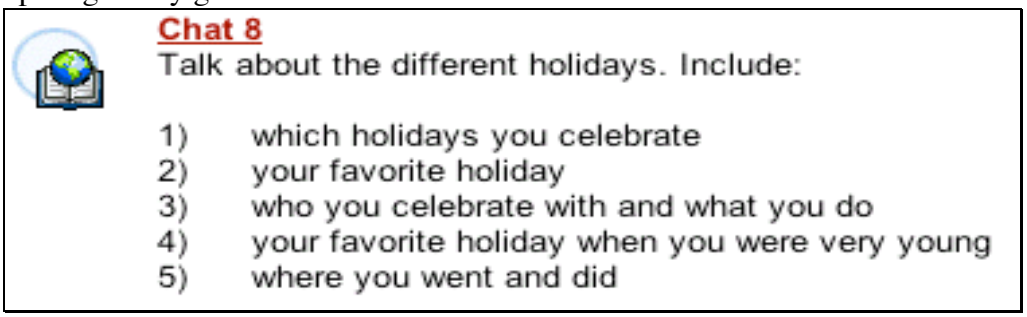

Figure 3.24: Instructions for chat assignment

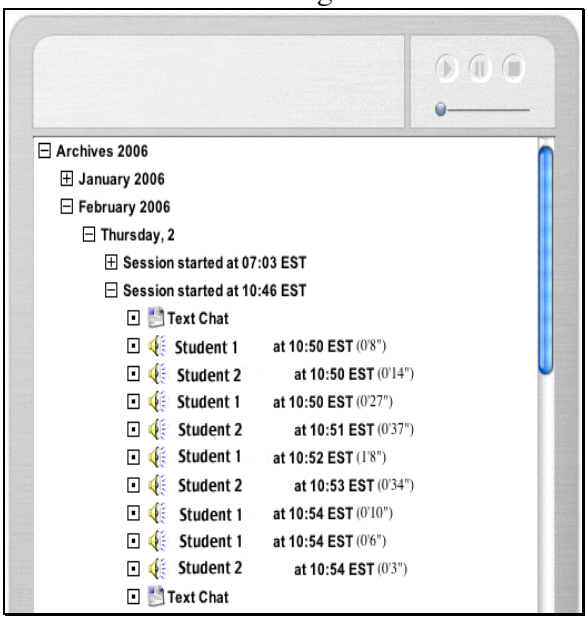

Figure 3.25: Archive of two-person chat

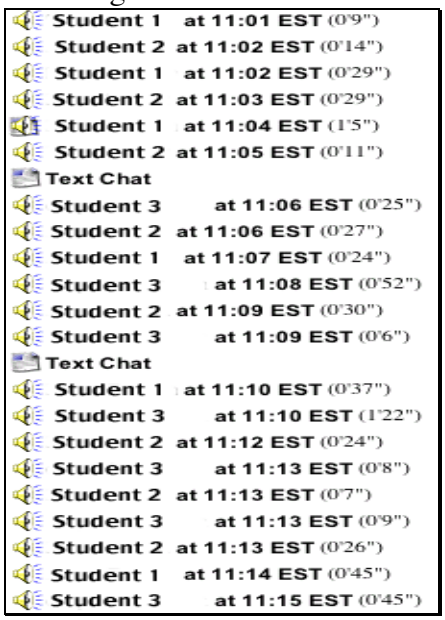

Figure 3.26: Archive of three-person chat

The audio chat itself will allow one person to speak at a time. The participant clicks a button with a hand (electronically raising their hand) to speak and an image of a microphone appears next to their name to indicate who the speaker is. If someone else is already speaking when another person clicks the hand, then a queue forms in the order in which participants request to speak (see fig. 3.27). Once the speaker finishes speaking by clicking a button with an X, the next person in the queue gets the microphone and is able to speak. The field on the right of the interface lists the participants, while the field on the left records any text messages, such as announcing entrance to or departure from the chat as well as any messages the participants type.

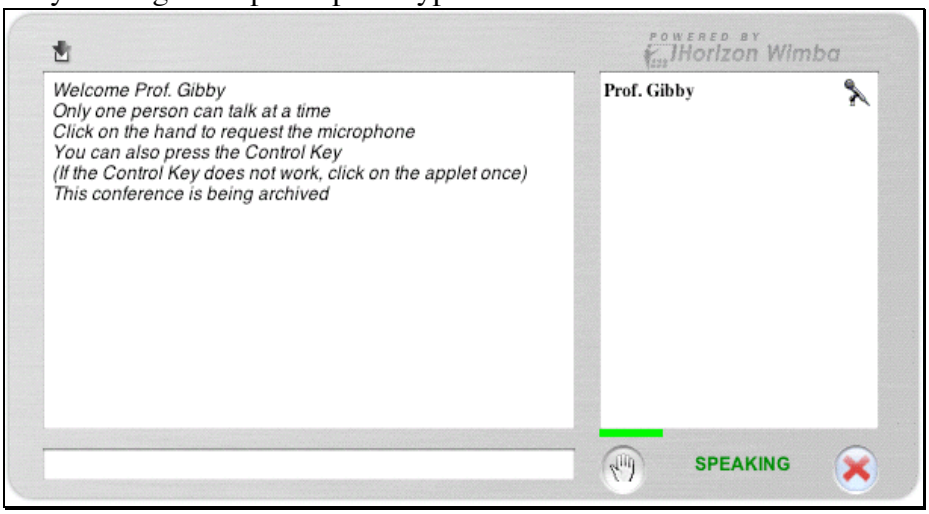

Figure 3.27: Audio chat room

Much like the **hablemos** assignments, these **chats** are interactions centered on understanding and producing understandable messages. There is also the potential for community creation in these interactions, which might differ somewhat from the community integration discussed by SLA theory, in that the latter implies the incorporation of new members into an already established community. Since there were some students who already spoke Spanish to some degree, including several heritage speakers, interaction as community integration might apply to the **chats**. These

interactions are entirely between a learner and other learners, however some of those learners may already be or at least be perceived by others as content experts since they may be native or heritage speakers. CALL would view these interactions as a simulation of a conversation; that is to say that it is a little unnatural in that it would not have happened without the assignment and there were prescribed elements that restrict the speakers freedom and control of the experience. Participants were asked to describe the similarities and differences between the **chat** and **hablemos** exercises and compare their contributions to learning. They were also asked about how often they chatted and how many other students participated in their chats. Since the language ability of their chat partners may also play a factor in the learning experience they were asked about the role of their partners' language ability in their learning (see appendix A, set 9).

3.4.4 Blackboard Assessments

In this course, there were four categories of assignments that take advantage of the Blackboard assessments: **práctica**, **leamos**, **escuchemos** and **video**. Participants were asked how each of the different assignments contributed to their learning, how much time they spent on them and other questions relating specifically to each kind of Blackboard assessment. They were asked about what, if anything, they did specifically before choosing to submit this assignment, how often they took advantage of the "save" feature to return later. Additionally they will be asked about the feedback feature and how all of these contributed to learning (see appendix A, sets 10-13).

Práctica

The **práctica** assignments were discrete item grammar exercises (see fig. 3.28). That means they focus on practicing one concept in isolation. Each of these assignments are linked to the tutorial that explains the concepts that the students will be practicing.

Among the available assessments are multiple choice, ordering, matching, true/false, multiple answer, fill in the blank or essay.

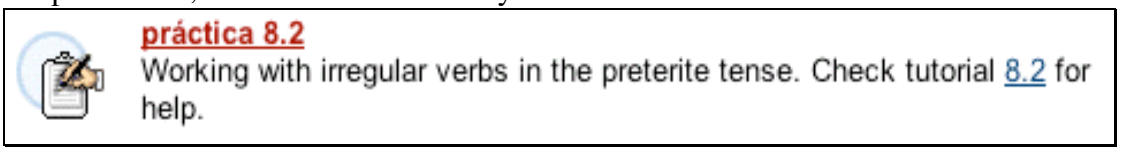

Figure 3.28: Link to discrete item grammar practice

In the example in figure 3.29 the student attempts to fill in the blanks with the proper verb form and then submits the assessment for grading. Students also have the option of saving their answers and returning to complete the assessment later.

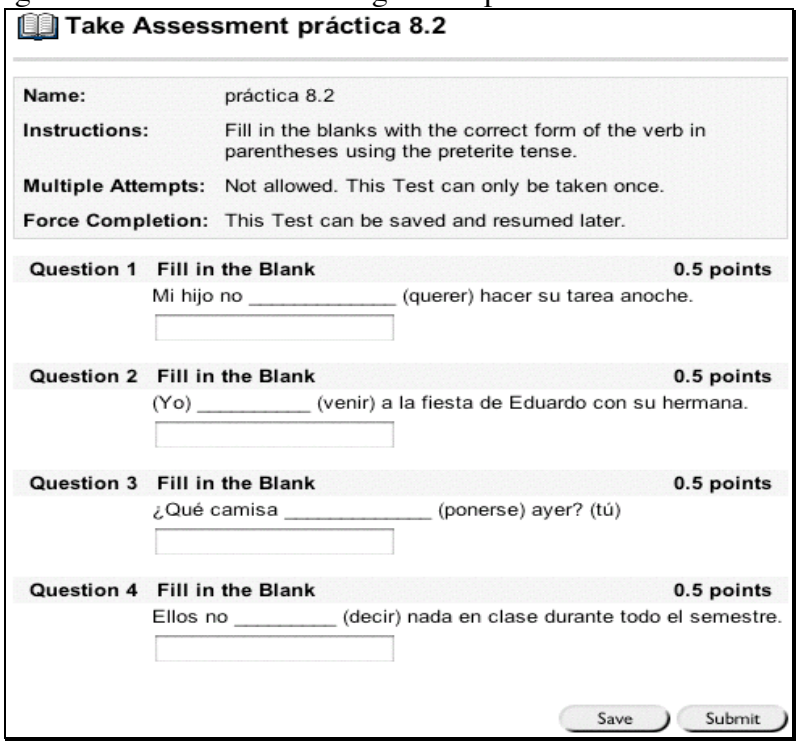

Figure 3.29: Fill in the blank **práctica** assignment

Most of the assessments were computer scored and set up to return feedback on correct and incorrect answers (see fig. 3.30). This feedback represents a kind of interaction. From the perspective of distance learning theory, this represents an interaction with the instructor (or subject matter expert that designed the feedback). It is

an interaction focusing on the language rather than the message for the purpose of practicing and providing support and feedback.

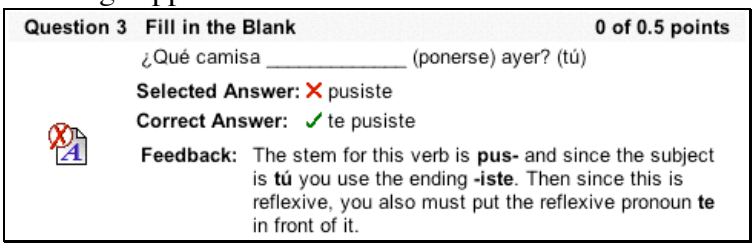

Figure 3.30: Feedback for fill-in-the-blank **práctica** item

The instructor initiates a prompt followed by a student response and then instructor feedback, which makes it similar to the IRF interactions discussed by FLL. Not all the assessments are scored by the computer; specifically, the free-writing type of assessments where the feedback is intended to provide an example of a possible answer or identify key concepts that should be included in the answer.

Leamos

The **leamos** exercises were similar but focused on reading comprehension. Each of these assessments contained an authentic reading passage from the text or ancillary materials and was glossed for vocabulary beyond the expected level of the students at this point in the class (see fig. 3.31). The comprehension questions were in English to ensure that it is indeed reading comprehension that is being assessed rather than writing skills or the ability to recognize words and phrases from the text. The feedback options were the same as in the **práctica** exercises and pointed out meaning clues in the passage. These interactions are between the learner and content and due to the authentic nature of the reading passage, SLA theory suggests it provides input for learners. It also simulates the natural activity of reading a newspaper or magazine article or even brief article of information discovered on the Internet. The feedback feature once again provides an interaction with the instructor for the purpose of support. In addition to the questions

asked about other assessments, participants were also asked about how much of the reading passage they understood and how that factored into their learning.

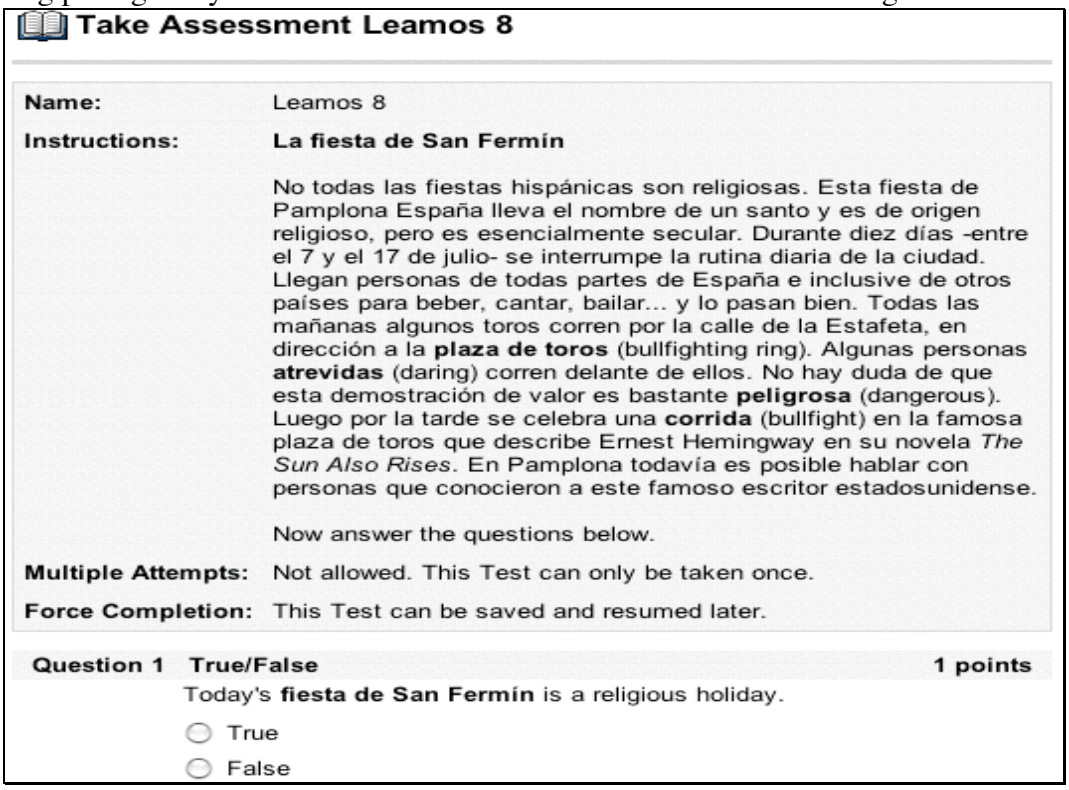

Figure 3.31: **Leamos** assignment with reading passage and one of the questions

Escuchemos

Escuchemos assignments used another Horizon Wimba feature in order to present a listening passage, which were then followed by comprehension questions (see fig. 3.32). This interaction is between the learner and instructor or content expert who made the recording that provided input for the students. It is also an interaction about the message as was the "leamos" exercise since the primary goal is comprehension. As with the "leamos" exercises, participants were asked about how much of the passage they understood and how it contributed to their learning.

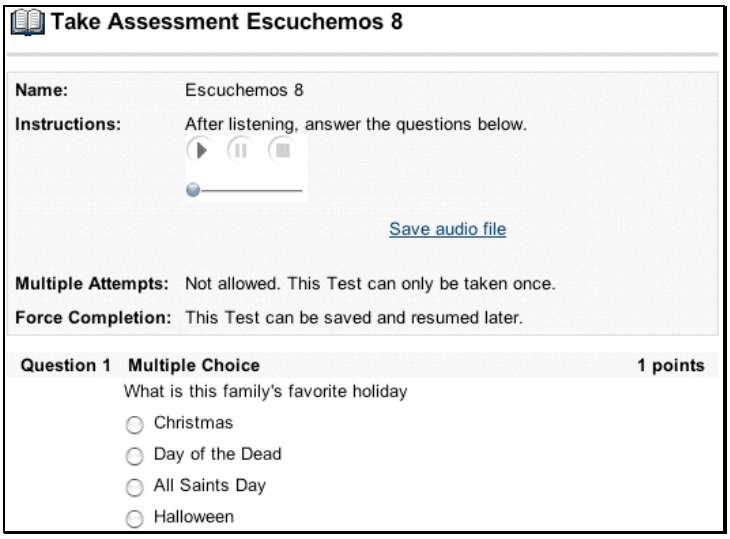

Figure 3.32: **Esuchemos** assignment with audio player and one question visible

Video

The final assignment category of Blackboard assessments is **video**, which is very similar to the **esuchemos** exercises. The only difference is that instead of an audio player there is a link to a streaming video (see fig. 3.33). This link launches a new window with the video clip playing in a multimedia player (see fig 3.34). The video was provided as a supplement to the textbook and so it emphasizes vocabulary and grammar points from each respective chapter.

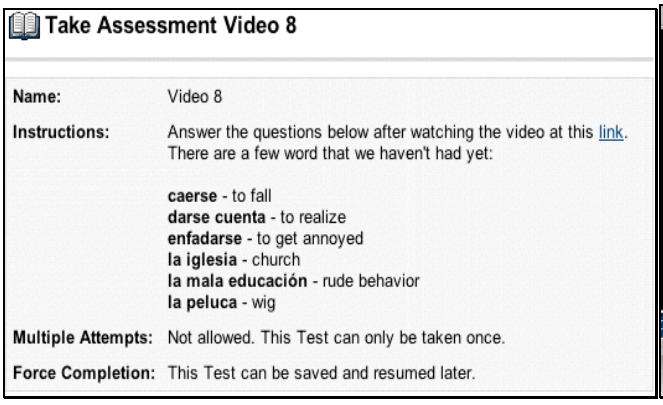

Figure 3.33: Instructions for "Video" assignment

Figure 3.34: Streaming video clip

They were professionally produced with native speakers from different Spanish-speaking countries. Also like the **escuchemos** assignments, they represent an interaction for the purpose of providing students with access to authentic materials as input. Once again the objective here is comprehension, so it is another interaction whose focus is on the messages spoken by the actors in the video. DL theory would classify it as an interaction with subject matter content. Since the link opens a new program in a window outside of blackboard, it creates an entirely new layer to the interface unlike the **escuchemos**, **hablemos** and **chat** exercises that are still embedded in blackboard. Participants were asked if that extra interface layer caused any additional problems and also how much of the video they understood.

3.4.5 Pruebas de práctica

There is one other assignment for which students do not receive any points and as such many treat it as optional. The **pruebas de práctica** (see fig 3.35) are online practices quizzes designed with HotPotatoes software. They provide practice in a structure similar to items on the exams and in the **práctica** exercises. These interactions are for support and feedback. They are likely to be viewed by the students as an interaction with the instructor, and as with the blackboard assessments, these are similar to IRF interactions. They are about the language in that the ultimate goal is not the understanding of the message itself. Instead the objective is the demonstration of grammar points and providing additional practice to the learners. Participants were asked about how often they accessed these optional activities, where they fit in with the other assignments, how they affected learning and why they chose to do them or not (see appendix A, set 14).

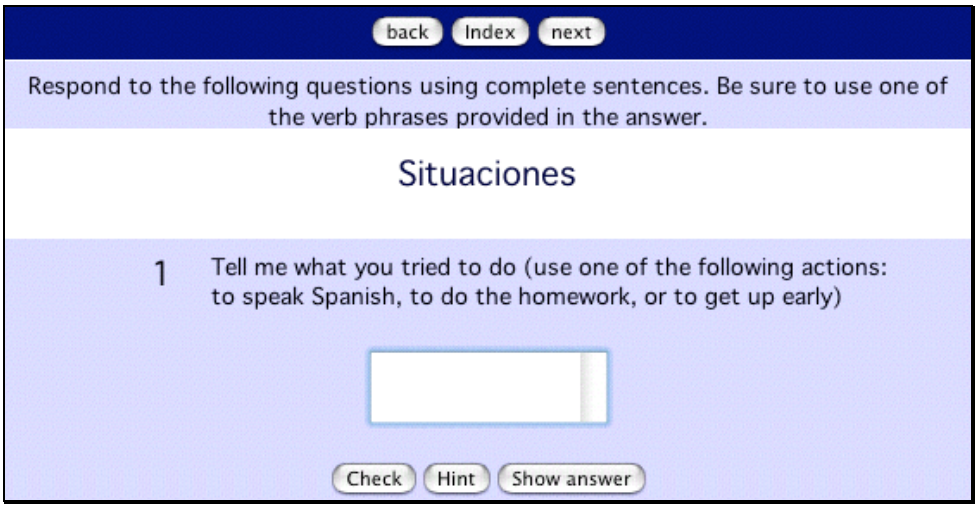

Figure 3.35: Optional practice quiz

3.5 CONCLUSION

This course was rich with interactions described in the four relevant fields: Foreign Language Learning, Second Language Acquisition, Computer-assisted Language Learning and Distance Learning. As such it provided an appropriate environment in which to study learner perceptions of interaction and its role in learning a foreign language online. The following are just some examples of those different interactions in the course environment.

As discussed in FLL literature there are interactions about the language in the online tutorials, about the message in the **Escuchemos** listening exercises and about the task in the discussion board for arranging chats. There are also interactions between teacher-class in the announcements feature, teacher-group when an email is sent to multiple students (for example to encourage those who are lagging behind), teacher-student such as email feedback to a workbook posting and student-student in the **chat** feature.

Examples of SLA interactions include those with the purpose of providing a source of authentic input as in the **video** exercises, testing internalized language rules

with the posting of workbook activities and in the **práctica** exercises and community integration with the **chat** and the **cultura** postings. There are also opportunities for interactions with native speakers in the **video** exercises and with non-native speakers in the **chat**.

Interactions from various positions on the CALL inspired continuum below (figure 3.36) include examples of direct instruction such as the tutorials without the shockwave feature (so the learner is only reading the material). There also exist examples of two-way synchronous channel like **chat** at the opposite end of the spectrum. Information transmission with some learner control such as the streaming audio (in **escuchemos** exercises) and video that can be paused or replayed and a two-way asynchronous channel as in the many email conversations are examples of interactions more centrally located on the continuum.

1-way direct instruction	information transmission with some learner control	2-way asynchronous communication	2-way synchronous communication
read only tutorial	streaming audio/video	email conversation	chat

Figure 3.36: CALL continuum of interactivity with examples

There are also interactions, as described by DL, that provide access to authentic material as in the **leamos** reading exercises, opportunities for communication like the **hablemos** speaking exercises and feedback/support such as the **práctica** grammar exercises. Likewise, there are interactions between learner-learner with the **chat**, learner-instructor such as the **questions** discussion board, learner-content in the tutorials and learner-interface when they are logging into and navigating within Blackboard.

Interviewing students in this online foreign language learning environment and analyzing their responses to the questions outlined in the previous sections and listed in the appendices will lead to a deeper understanding of the role that interaction plays in the

learning process. Examining their individual experiences and perceptions in depth will address the questions posed by this study:

1 What is the effectiveness of the available interactions in a web-based Spanish course as perceived by community college foreign language learners?

2 How do the different interactions work together to facilitate learning in an online foreign language learning environment based upon their purpose?

3 How do the different interactions work together to facilitate learning in an online foreign language learning environment based upon with whom or what the student is interacting?

Chapter 4: Analysis

4.1 THE PARTICIPANTS

Each of the participants brought a unique set of circumstances and experiences to the course. Table 4.1 provides a summary of the 10 participants with whom interviews

Part. #	Sex, age	Prev. Internet experience	Prev. classes w/Internet	Prev. language experience	Why Spanish
1	Female, 35-44	Between advanced and expert	1	Heritage Learner (HLL-4)	fulfill degree requirement
2	Female, 55 or older	Between novice and advanced	0	high school/college and travels	brush up "rusty" skills
3	Female, younger than 25	Between novice and advanced	15	middle & high school	requirement for transfer to four-year college
4	Female, 45-54	Advanced	4	Heritage Learner (HLL-3)	fulfill financial aide requirement, get A
5	Female, 25-34	Advanced	More than 2	middle & high school, native speakers at work	part of degree emphasis
6	Male, 35-44	Advanced	More than 2	Heritage Learner (HLL-4)	fulfill degree requirement and improve fluency
7	Female, 55 or older	Between advanced and expert	More than 4	high school, native speakers at work	fulfill degree requirement, communicate at work
8	Female, younger than 25	Advanced	13	high school, friends	degree requirement, get A, remember for long time
9	Female, 25-34	Between novice and advanced	5	Heritage Learner (HLL-4)	degree requirement and improve fluency
10	Female, younger than 25	Between novice and advanced	8	high school, friends, family and co-workers	degree requirement and professional need

Table 4.1: Summary of participants

arranged and carried out. Fifteen people originally responded to the invitation to participate, but not all agreed to participate. It is important to include information about

their unique experiences to have a context in which to understand and interpret the data collected. The following is a brief description and background for them.

4.1.1 Participant #1

The first participant was female and between the ages of 35 and 45. She considers herself half Hispanic and grew up around her Hispanic grandparents. As such she was exposed to the language and said that she had a "knowledge of Tex-Mex" which can be interpreted as a reference to border Spanish. She fits the description of type 4 Heritage Language Learner (HLL-4) according to Carreira (2004) in that she sees herself as outside of her heritage culture and learning more Spanish would establish an identity in that culture (an individual motivation) as opposed to HLL-3[3] who see learning the language as laying roots in that community (a group-oriented motivation). When asked about her reasons for taking the class, she first said it was a requirement of an advanced degree program. She had recently transferred from one graduate school to another and a language requirement was part of the new program. She selected Spanish because of her heritage, but it was quite clear from our discussion that if it had not been a degree requirement, she would not have taken the course.

She offered several reasons why she selected a web-based course rather than a face-to-face one. The first was that she had a hectic schedule that made regular class meetings unfeasible. Another contributing reason was a negative experience in a face-to-face class. She did not like the feeling of being put "on the stage" by the professor with questions. She was clearly bothered by the experience which was so negative that a friend who she considered fluent did not go on to Spanish 2 and quit college altogether. She

[3] Type 1 and 2 HLL's are reserved for those who are in a single language track. Carreira's article focuses specifically on high school or GED program placement, but also offer insight with regard to learners outside of that arena. At the community college in this study the circumstances of HLL-1 and HLL-2 do not occur since English is the primary language of instruction in subjects outside of the foreign languages. The relationship between HLL-1 and HLL-2 parallels that of HLL-3 and HLL-4.

thought this format would be a way to work more on her own and not have to "perform" in front of others. She identified herself as an only child who doesn't warm up quickly to others and prefers to work by herself. While she didn't enumerate this among her reasons for taking a web-based class, it is not unreasonable to think this also may have been a contributing factor.

She was very experienced with computers and indicated that she had worked with word processors, spreadsheets, electronic presentations, databases and digital image software. She considers herself between and advanced and expert Internet user. She worked on a PC running Windows XP and connected to the Internet through DSL using Internet Explorer.

During the interview she was very outgoing and spoke easily about everything we discussed. Small prompts evoked long, thoughtful answers. Her training and professional experience in behavioral sciences seemed to lend itself to a kind of self-analysis as we spoke. She freely discussed her experience not hiding the fact that due to work constraints, by necessity she had to approach the class from the standpoint of doing just enough to get the credit necessary. That caused her to make decisions about what assignments to do based on their perceived value toward that end, in short she compared how many points they were worth to how much time they required and how they prepared her for high point value assignments like exams. So she always did the grammar "práctica" assignments because the studying necessary to complete them would also translate into better test performance. Other things such as the chats, while she readily admits believing them valuable to learning and being able to speak the language, she saw as too difficult to coordinate with other students and the amount of points involved was not enough to keep her from passing, so she chose to skip them. This illustrates how the

objectives of a learner can play a big role in what is perceived as valuable to the learning process and that there is a difference between learning and fulfilling a requirement.

As noted previously, the first point of contact in the Blackboard course, and hence the first opportunity for interaction, is an announcements page. She checked this page and valued the announcements the professor posted, particularly those that were "tips" about the language or reminders of upcoming deadlines and assignments. She reported scanning them quickly first to determine whether or not they applied to her and just ignoring that ones that didn't. When asked about the quantity of announcements, she replied that it was appropriate because even when they didn't apply to her, she could see them being useful to others. From this, it can be inferred that she perceived these as a 1-way transmission of information that was either helpful or at worst just irrelevant to her.

She described her progression through each module saying that she "did them in order" as they were presented in the assignment list. She would begin by printing out the tutorials, organizing them in a notebook, but admitted not using them once they were there. From there she moved on to the first of the Blackboard assessment activities, the **práctica** assignments. She referred to these as "demonic children" and said that she did not like them, but understood their value to her learning. She described their biggest contribution as the feedback she received after making an error. She said the following:

> I liked the feedback because, um… it… Feedback, I thought, explained it very briefly, but very direct. And as an analyst, I tend to over-analyze everything and so I over-analyzed all my assignments, and it takes me a lot longer I think than if I would just take it as it is, you know.… And I think that was like my biggest challenge was to stop analyzing. And so when those feedback came up, they were just very basic and very to the point, and there was no way to discuss and say, "Yeah, but…" back to it. You know, so I liked those because they were very direct, and they would just tell you, "Don't use this with this because…" and that's it.

Because she could not reply to this feedback, it forced her to accept the simple explanation rather than creating "what if" scenarios (what if I said it this way, what if I leave out this word) that could complicate or confuse what was otherwise a specific and narrow grammar point. She thought this was an advantage because when in a classroom, she would not have accepted such a simple reply. She added that classroom teachers often over-explain things as they "glamorize everything" and "elaborate," going over things again and again.

From that point she counted up the days until the deadline and then divided up the work so she would do something each day until finishing the module. She would go through the other Blackboard assessment activities (**leamos**, **escuchemos** and **video**), and while she liked doing them, they were easy for her to comprehend and as a result didn't feel like she learned anything from them. In a similar fashion, she liked leaving audio messages for the **hablemos** exercises but again didn't see much value to her learning because there were too many of what she called "cheat mechanisms" or resources. She would often prepare what she wanted to record and then check it on an online translation site or with a tutor she had used previously or with native speaker friends. She said she would check with them to make sure she was correct, seeking feedback in the sense of Second Language Acquisition—confirmation that she had properly applied the grammar rules.

The culture assignments were the only ones where she really felt that she learned something because she was genuinely interested in that information. This hearkens back to the earlier description of her as a HLL-4, who was seeking to connect with her heritage culture again. It is possible that her interest facilitated a better interaction with the content.

Since she skipped the **chat** assignments, the only time she actually interacted with other learners in the class was when she looked at something they had posted. She did this occasionally with the assignments that were posted out of the workbook when she was unsure of the directions. She looked at what others had done in order to get an idea of how the assignment should be completed. She also read some of the reflections posted by others although she didn't ever post her own reflection and found it comforting to see that others were struggling with the class as well.

When asked about her overall experience in the class, she immediately praised her professor's availability.

> I loved my professor. He was really good, because if I sent him an email… it could be one in the morning when I was done teaching my classes, I'd send him an email and he would email me right back. I swear he never slept. He gave me a lot more personal attention than I could have gotten in class. And that was a huge deal for me.

Adding support to her overt declaration of how important that email communication with her professor was, when asked if he had ever replied to one of her email questions by posting a general announcement, she replied, "No, he was very personal with all his answers." And when asked about what she thought was interactive about the course her first thought was back to the availability of her professor.

> Honestly, you know I had so much email exchange directly between the professor and I. That was the only interactive part that I really enjoyed, because he was so… there. It was like he was living with me half the time because he answered his stuff right away. So the most interactive thing to me was that the professor was really proactive in answering things and checking the email and being available. Because I've heard other people at different colleges talk about how, you know, these online classes you can't get a hold of the professor, you can't find him, he won't answer his phone, he won't answer his email, and I'm just going, "Wow, I must have had a drop in the bucket," because, I mean, mine was great.

She went on to speculate about how other portions of the course in which she didn't participate would have been helpful if she would have had the time to do them all. Since she approached this course from the standpoint of doing the minimum necessary in order to receive credit, it can be inferred that she considered learner-instructor interactions as making the most important contributions to her experience.

In terms of the purpose of these interactions, support appeared to be her perception of why these interactions contributed to her learning. She was very appreciative of the understanding nature of the professor who, at least from her perspective, clearly made her concerns his own. She mentioned how he supported her own goals and time needs.

> I explained this is my situation you know. He was real receptive to it and said, "I understand that you need the credit." He said, "I'll work with you on your schedule. I'll do whatever it takes to help you get through it."

This kind of support goes beyond just explanations about the language or assistance in deciphering a message. In fact, the latter was not support that this learner even needed as her previous experience with the language made comprehension one of her strengths. The support most needed by this learner was an understanding and flexibility to work with her schedule to make completion of the course possible.

The interactions that she perceived as valuable were clearly those that resulted in support for her previously stated goal: passing the course and getting the requirement she needed. That said, the only thing she considered "learning" was cultural content, because that interested her. Whether this was because of an inner desire to reconnect with her cultural heritage or something else, it is clear that interacting with this content of interest did result in new learning.

4.1.2 Participant #2

The second participant was also female. She reported her age as 55 or older and indicated that she was able to practice her Spanish with native speakers at her place of employment. Nothing in her family history had provided any extra exposure to the language, but she had studied Spanish previously both in high school and one semester of college. During a recent trip to Mexico she felt as thought her Spanish was "rusty" and found herself returning home with a desire to refresh her skills.

This course and its prerequisite were the first Internet based courses she had ever taken and stated that she had never before had a class that used the Internet at all. She rated herself between novice and advanced as an Internet user but said she had a wide variety of experience with computers including word processing, spreadsheet use, electronic presentations, databases and digital imaging. She did her coursework on more than one computer and used both a Mac and a PC running OS X and Windows XP respectively. She used both Internet Explorer and Netscape as browsers and accessed the Internet via cable modem.

She said that the online course fit well with her busy work schedule and "other activities" in her life. The flexibility of working at home on her own time schedule was one of the things that drew her to the course. Since she had previous experience studying the language, she was comfortable with the online environment. It would be reasonable to infer that her previous experience with computers also may have eased concerns about the class format if she had any. Her indication that previous Spanish experience comforted her in this medium implies that proficiency in the subject may act like a cushion or safety net for potential difficulties caused by the delivery format.

This participant was pleasant to speak with and although her initial responses to questions were often brief, she responded well to follow up questions. On some occasions

she did give lengthy answers without the need for follow-up question as a prompt. Her answers were very deliberate, and she appeared very thoughtful about her answers. It was clear that for her the final grade was not as important as just being able to communicate better.

She checked for announcements daily and mentioned that she remembered "tips" and reminders as well as student support. She cited an example of the latter as one announcement that really stood out.

> Oh, was it on the final where the tape recording didn't work for some people and for the audio portion of the final exam and so I was sort of concerned about that. I thought, oh what am I going to get minus whatever it was ten points because I couldn't do that or would I have to go back in and take it. So I remember an announcement regarding that. You know, that since not everyone could do that portion of that test that wouldn't be counted, so that was good.

Given her reaction and clear memory of the situation, even though it was a 1-way transmission of information, this clearly represents the professor reacting to a situation in such a way that it engendered an emotional reaction for at least this student—relief. In that sense, it could be considered a kind of interaction despite being a 1-way transmission.

She did visit the **questions** forum to read what others posted and once posted something herself, thanking another student for explaining an easier way to access the videos. She also used the forum where some of the workbook exercises were posted as a way to compare what she had done with others.

> I'm just real competitive (laugh). I don't know. I just wanted to see if I could understand what they were saying and it was a little gauge, I guess, of how well I was doing. Sometimes I would pick up things. It would help me see if I made a mistake. Oh, I should have said it like that or Oh, I didn't conjugate a verb correctly. I did find out you could go in and modify. I thought I wonder if he could see how many times I modified this.

A quick check of the Blackboard course supported this by indicating that she visited this forum 166 times while only making the 7 assignment postings. It amounted to almost 40% of her forum accesses during the semester. Her actions clearly show that this was indeed an important interaction to her.

When she approached a module, she would start by reading or skimming the chapter and then looking at the tutorials. From there she would do the workbook assignments and the practice quizzes. She explained that she did these before any of the assessment features (**leamos**, **escuchemos**, **práctica**, and **video**), since she viewed those like tests "because if you mess those up you really couldn't go back." She then moved on to the speaking exercises and saved the culture for last, because it was "the easiest." She enjoyed reading others' postings to this forum and visited it 47 times, which represented more than 10% of her forum accesses.

Other areas where she interacted with other learners through asynchronous postings included the **reflections** forum and the **introductions** forums. She visited these forums 32 times and posted to them just 4 times, so when asked what she thought was interactive about the course, it was no surprise that she answered:

> You know and when the other students would post questions that would be considered interactive. I usually didn't respond. I would read them and just reading everyone's workbook postings, that was interactive, and I thought that was interesting.

This participant clearly looked for opportunities to interact with other learners as she accessed the forums a total of 443 times, the most of anyone in her course and almost twice the average.

4.1.3 Participant #3

The third participant was female and younger than 25. She reported that she had no income of her own, leading me to believe that she was likely to be a full-time student.

She had previous experience with Spanish, studying three years in high school and some in middle school as well. When asked about her motivation, she stated that two foreign language courses were part of a transfer requirement and that since she had taken Spanish before it seemed the logical language to pick. She said that she had struggled with it a little before and thought this might be a good opportunity to get a better grasp of it.

She described herself as a between novice and advanced as an Internet user. The computer skills she listed included the use of word processors, spreadsheets and electronic presentations. She reported having participated in six previous courses that were completely online, three that spent as much time in the classroom as online and others that used the Internet in more limited fashions. She worked on an HP computer running Windows 2000 and accessed the Internet through a dial-up modem. She said that her browser was AOL.

For the first semester Spanish course she took the online format because it fit better into her schedule. For the second semester she wanted to continue with the same professor, but admitted that she probably should have taken a face-to-face class, because you have to seek out help in the web course. This desire for familiarity with instructors or at least some knowledge of them is commonplace in higher educations. Students often seek recommendations from others for instructions, so much so that websites like pickaprof.com have arisen as a forum for students to view ratings from other students (as of February 2007, this site indicated almost 900,000 professors rated).

She was very polite and willing to talk about her experience but her answers were generally minimal. Follow-up questions were necessary for coaxing out any information below the surface. Where other participants gave answers with a paragraph, she usually answered with just a single sentence. It seemed clear that she had never given much thought to the issues addressed in the interview.

She checked the announcements everyday and only remembers announcements about "tips" and reminders about deadlines. She considered the ones closer to exams as the most valuable because they helped guide her studying. When asked about the number of announcements she said that it was "about right" but gave no indication as to why. In an effort to learn more I asked why she didn't think that more frequent announcements would help more, and to this she speculated, "people might not check it so frequently, so I think it was just enough because some people might only check every other day or a couple times a week." The implication here is that a large number of announcements might build up, and those who don't check them as often might not pay close enough attention when confronted with that many.

While she did browse the **questions** forum she never posted anything there. She thought the questions posted there by other students did not really apply to her and she preferred to email her professor directly when she had questions. The **workbook** forum she did find useful.

> That really let you know where you were like if you were doing the assignments correctly. If you got a bunch of red stuff back, you knew you had to go back and make sure, okay, I'm not doing something right here. I think that helped because you had to do it yourself and she checked it, the teacher. That definitely helped.

The value of that forum appears to lie in the interaction with her professor that it led to. Here was a method of getting feedback from the instructor about her progress in mastering the material.

When she began a module, she would start by printing out the list of assignments and then read the chapter. After once through the chapter, she would start the workbook exercises and refer to the tutorials while working on them. She would do the culture assignment next followed by the online exercises, saving the **prácticas** for last. She did

the practice quizzes right before the **prácticas**, which she referred to as "quizzes" on one occasion. She said the **prácticas** were helpful,

> Because it would tell me what I did wrong and it gave you the right answers, so stuff like this, yeah, so that you would make sure when you were studying okay this is why and this is the tense and the little extra note, you know, either you or the teacher, my teacher would put it in… Wasn't there sometimes also an extra note, too? I guess you kind of figured what kind of answer we might have put, you know, so this is why you shouldn't have put that. That helped, too.

Here it seems she recognizes the nature of the feedback pre-programmed into the assessment. Since it is trying to anticipate possible mistakes and address all of them in the same message, the "extra note" as she put it becomes a tip that warns the learner about other common mistakes.

Looking at her comments about the other Blackboard assessments she seemed to assess their value by how they prepared her for the tests. For example, she said that the **video** assignments were less helpful because there were extra things in them that she wasn't studying. She did say that she saw the **escuchemos** exercises as examples of "how it was supposed to sound." It is interesting that she mentions this about the **escuchemos** exercises, but not the **video**, since that was actually produced with native speakers. Krashen's model of i+1, and theories surrounding comprehensible input would suggest that the **video** would be a good learning tool since, even the participant acknowledged that the general meaning of the exercise could be understood in the context it was presented. It is possible that these made her feel less prepared for the test.

She did not participate in many **chat** assignments, because she said they didn't seem worth the effort of coordinating with another student. She described one chat with someone who was much better at Spanish than she was, and it made her feel "kind of embarrassed." It may be that she is assigning low value to the assignments that made her feel inadequate. When asked about what was interactive about the course she first

mentioned the Interviews, but did not include the **chats** in that list. She suggested that meeting with other students outside of the class situation might also be helpful. Despite the similarities that the interviews and these get-togethers would have to the **chat** assignments she did not consider the latter as particularly helpful. Based upon this, it seems likely that the negative experience caused her to judge that activity as not useful, allowing her to avoid them in the future. This may be a case when the possible benefit of having these conversations was outweighed by the potential harm to her motivation to participate in the course.

4.1.4 Participant #4

The fourth participant was female and between the ages of 45 and 55. She considers herself Hispanic and fluent in the language that she was taught since birth. Whereas participant #1 would be considered HLL-4, this one is clearly HHL-3 since her view of the language is that of establishing and/or strengthening her roots in the heritage culture (Carreira, 2004). Her motivation was that she needed another course to meet the financial aide requirements and she thought it would be an easy A. The way she made that comment seemed to imply that the course was not as easy as she had anticipated, and she confirmed that when asked, saying that the course really leveled the playing field because it was designed to really make you think and analyze things she hadn't considered before. This is an interesting attitude, since non-heritage speakers certainly consider those with the previous language experience to have an advantage. Other participants expressed feelings of intimidation when working with someone who they perceived to be fluent already. Her expression of being on the "same plane" with other students comes from the standpoint of a formal study of the language. She admitted being unfamiliar with the grammatical terminology and felt that put her squarely among her fellow students.

She described herself as an advanced Internet user and her computer skills included the use of word processors, spreadsheets, databases and digital imaging. She reported four previous courses that were taught completely online. While she did not identify what kind of computer she used, it would have likely been a PC since she used the Windows 2000 operating system. She accessed the Internet via a cable modem and using the Internet Explorer and Firefox browsers. While she did have to purchase speakers for the class, she gave no indication of that being a financial burden.

Her reason for selecting the online format was that it fit her schedule much better. It fit in with her full-time employment and allowed her to be home with her son as much as possible. Her confidence as a heritage speaker clearly showed as suggested that it was here previous knowledge and expertise that would make the course easy despite the delivery medium.

She was very sociable and seemed excited to be talking about her experience in the class. She often started answering my questions before I even finished them. Despite that, her initial responses did not go much below the surface and required many follow-up questions. There were not a lot of features about the course that really stood out to her. She mentioned corresponding with the professor via email, and this may indicate that she viewed him as her first resource rather than the online tools and elements.

She checked the announcements daily and reported that they were all helpful to her learning. When asked to categorize them, however, she did not offer any suggestions. She would agree when I suggested something such as reminders about deadlines, but could not propose any on her own.

When asked about the **questions** forum, she did not seem to remember it at first, but with a little more explanation of its purpose she was able to say that she did not post anything to it. She preferred to email the professor directly with her concerns, which she

described as not about Spanish but more about the assignments. She found this email back and forth to be very important to her and even said:

> I think if I hadn't had that support I would've had to drop the class at some point because I would like feel… I wasn't doing good; I wasn't doing well. So I would email him that I'm not doing well and he'd say, "You're okay…"

Relying upon this communication so much, she was much more of a passive participant in other areas such as the **reflections** forum. She liked to read what other people posted but didn't post any herself. The **workbook** forum was another one that she visited in order to answer questions about how a particular task was to be done. She would look at what others had done to get the idea of how she needed to approach the assignment. This is similar to what Bento and Schuster called "witness learners" (2003). These learners are characterized by a high level of interaction with content, but lower levels of interpersonal interaction. This is not exactly the case, because she said she relied a lot on direct communication with her professor as well whereas a prototypical witness learner would not.

At the beginning of the course, she went directly to the **práctica** exercises, relying on her previous knowledge to get her through them and would only visit the tutorials when she didn't understand something. She quickly found that she was unable to score well on them without going back to the text and tutorials, so she had to alter her initial study pattern and start with tutorials. She expressed almost surprise that the course was as rigorous as it was.

> I discovered that your course, which I thought was great, eventually, that you make everyone equal. Whether you speak Spanish or if you took some Spanish in the past, this course was made so that I thought, and I kept analyzing everything, so that Spanish speakers and non-Spanish speakers were going to be on the same plane, I thought. That's what I felt because I did not know much more than the other ones, the other people, except for the orals. I do read very well and write very well, but I don't know,… I don't remember all the verbs, the names of the conjugations.

She found the tutorials helpful because they were good companions to the explanation in the textbook. She found herself returning to them while working on later chapters.

When it came to the postings in the **cultura** forum, she found most of the other student postings too short to be of much value to her. On at least one occasion she was impressed by what another student had written, but for the most part they did not contribute anything to her learning. This adds support to the assessment of her as an HLL-3, since, due to her roots in the heritage culture, surface level observations would probably not seem worth pointing out.

She found the **workbook** postings "annoying" but acknowledge that they were a key to knowing how you were progressing in the class. She did not like being corrected but said that she should have paid more attention to the corrections her professor sent. Likewise, she was often frustrated by the **práctica** exercises because they would often conflict with what she knew to be right. Often that difference could be attributed to a difference between "academic" Spanish and more colloquial forms common to heritage speakers in the area. Sometimes the error came from errors detected by Blackboard that had nothing to do with the language such as adding a period. Her professor told her she should contact him about those kinds of things so he could adjust the scores, but on this topic she did not approach him. It is possible that she felt embarrassed as a heritage speaker to make any kind of mistakes. She indicated that this helped her learning by forcing her to slow down and watch out for careless mistakes.

Of the other assignments, the only ones that she made significant comments about were the **hablemos**, the **leamos** and the practice quizzes. Like many others, for the **hablemos** exercises she would write out her response before recording it, and then play it back and re-record if she was not satisfied. She said that she often listened to what other

people had recorded just out of interest in how others were doing. While she reported that the **leamos** exercises were all very easy, she said that they made a real contribution to her learning.

> Big contribution, I think. It made me revisit my girl days. My days as a girl at school reading something, so it made me feel good.

Again in this case, we see her reconnecting with her heritage culture roots. The practice quizzes she enjoyed more than the **práctica** assignments because of the clues and hints. She said the helped her know she was on the right track and didn't affect her grade. It may be that she found these to be safe exercises since if she did make a mistake, no one would know.

She certainly was not a witness learner in regards to the **reflections** forum, but she gave some conflicting information about it. On the one hand she enjoyed reading what others wrote and posting her own observations.

> It makes me remain within the group. People who are taking part in the class. Showing an interest. It was a good thing. I was surprised other people didn't post anything. I was hoping everybody would, but no. Maybe it should be worth points because people would write. I think people need to know, I mean, it's important that others in the class know what the others are thinking. Maybe what they learned from it and then several times there was a person, I couldn't remember her name, a Spanish girl who would post. I would read hers because they were always interesting. She's a mother and I'm a mother. She would say something about whatever the assignment was, but she had a different perspective than I thought about. So, she would always write something in the reflections often and I would always listen because I thought it was interesting to read.

However when asked if that made her feel closer to that individual, she hesitated to say that it did.

> No, not necessarily, but it was interesting to read what other people were thinking. It's difficult to feel close to somebody online because we do not [have] communication in class. They don't know me. They don't have time or they don't care or they work. Not that I have time. I'm just saying… so it's really not easy to feel like you are part of the class unless you take part in those things that don't have anything to do with the assignment.

This appears to be a reference to transactional distance. She essentially says here that she felt isolated from much of the class because they did not participate in the reflections. Her next comment is even more interesting as it implies that some students might actually inoculate themselves to the effects of transactional distance before the begin the course. When asked if those feelings made it more difficult to learn in this environment she quickly replied, "No, because I knew I was going to be alone when I was doing it." This comment is unprecedented in the literature on transactional distance which views interaction as the means of overcoming it practically to the exclusion of other possibilities.

When discussing why certain aspects of the course contributed to her learning, she most often used the word "interesting" in her reply. Even though she acknowledged the usefulness and importance of many of the course features, the only ones she seemed willing to spend extra time on were those that held some kind of interest for her. While she agreed that many assignments had to be done in order to progress in the class, it was the **reflections**, **leamos** and **hablemos** exercises that she identified as the most valuable.

4.1.5 Participant #5

The fifth participant was female and between the ages of 25 and 34. Her previous experience with Spanish included some courses in middle and high school in addition to a lot of contact with native speakers at work. Her reason for taking the course was that she was pursuing a degree in bilingual early childhood education. While it could be stated then that she was taking the course as a requirement, it would be more accurate to describe it as an interest, since it is an integral part of the degree she has chosen.

She reported her level of Internet expertise as advanced and stated that she had taken previous classes that were entirely web-based, some that used the Internet for active communication of information during the class as well as some that merely had a web

presence. She described her previous computer experience as including the use of word processors, spreadsheets, electronic presentations, databases and digital imaging software. She indicated using both a Compaq and an HP with the Windows XP operating system. She connected to the Internet via a cable modem and used Internet Explorer as her web browser. She had to purchase both a microphone and speakers for the class but did not give any indication of that being a financial burden.

She was first drawn to the online course because of full-time employment at which she worked 40 to 48 hours per week and her other degree coursework. These things made it very difficult to fit another face-to-face class into her schedule. She said that she "went against what everybody said" by taking this online foreign language course. When asked who had advised against it and why, she reported that someone in her husband's immediate family had taught multiple foreign languages and that individual "planted the seed" that it wasn't a good idea. She indicated that everyone else she talked to about it also "couldn't believe" that she was going to try to learn a foreign language that way. She described their concerns about "not actually participating in communication enough." Despite the concerns raised by others, the reality of her schedule did not really provide a viable alternative for her.

She was very thoughtful and gave lengthy responses to most questions. Sometimes while answering one question, she would provide information that a subsequent question had been designed to prompt. She even offered examples from other web-based courses she had taken to help explain her views. It is possible that her educational training might have predisposed her to thinking about how courses were taught and designed. She was easy to talk to and quick to answers, but at the same time those answers were thoughtful and she did not require as many follow up questions to get

more meaningful answers. While this was one of the longest interviews, the time seemed to pass very quickly.

She reported that she checked announcements every day unless she was on vacation and even then if it was a longer vacation she would still try to get online: "I just took a vacation and I was on probably three times out of seven days." When asked how often she found the announcements helpful she said:

> I would say 95 percent of the time. Even if it was just a little announcement that was a reminder of a previous announcement I felt it was very beneficial and the flip side if there's not an announcement that entire week or two weeks I'd get concerned that, you know, I had missed something. I really think the announcements are beneficial.

One of the interesting points in here answer here, is that she discusses the effect of transactional distance upon her. When there was a week or two without announcements, she started to get concerned. She also said that she came to rely on the announcements even more than the syllabus. When categorizing them, she pointed out reminders and tips, but also took an example from an art class she was currently taking. The art professor would also put up announcements about local events that dealt with the arts and suggested that a foreign language online course might benefit from these kinds of announcements as it could provide a way for students of the online course to find a place to interact with other students. She also indicated that while not every announcement was helpful to her, she could easily imagine it being helpful to someone else and as such didn't feel like she was being overwhelmed.

She found the **questions** forum to be a place to interact with the other learners in the class. She never started a thread herself, but she always read what others posted and sometimes replied.

> If it was a question that was just a general topic that I knew the answer to I would and if the answer wasn't already there, I would post what I thought the answer

> was…. I never perceived the questions portion of the blackboard to be a question to the professor. I think if you have a question for the professor you can email the professor and so this is more about communication amongst all the students and you might learn something by looking at someone else's question and another student's answer that you wouldn't have learned otherwise.

She found the other forums to be a good way to organize the class in terms of signing up for interview times and making test center preferences known. She thought it was important to be organized in an online class and these forums made it easier to plan things out.

When it came to the assignments, she did them in the order they were listed in the course, but she did a few things in preparation before actually starting to work on them. She first printed out every thing, because she found it useful to have a hard copy she could flip through when she wasn't on the computer and she could take notes on them. From there she created a spreadsheet with all the assignments listed on it, the due dates, the dates she submitted them and the grade she got. Once here preparation was finished she stared with the tutorials. She found the tutorials more helpful than the textbook itself. In particular she found the guiding questions helpful because,

> I think it was easier to remember what I needed to ask myself at certain circumstances… but having someone telling you this is what you need to ask yourself instead of going through the textbook and going [asking yourself] so how am I gonna remember this. It's that little question that triggers… this is when you use this, and this is how you know; ask yourself this question. So those were extremely beneficial and I used those all the time.

She also preferred the explanations on the tutorials rather than those in the text. She found them more "summarized." Since she worked with her printed copies more than the online tutorial, she did not take advantage of the shockwave animations. She reported that once she had printed everything out, she just used those. In fact she often would flip through the tutorials in her car just before going in for an exam.

From there she would continue working through the various assignments doing the workbook pages last because they were the most time consuming. The portions that were posted she found particularly helpful because she could compare her responses to those of her classmates.

> I would do mine in Word usually and then go look at other peoples and if mine were different try to figure out why… That was really beneficial because I think I made a lot of the same mistakes over and over. I don't know why, but as soon I would see it I'd, "Oh, why did I do that."

For this participant there was more to the assignment than just "turning it in" by posting it to the forum. She clearly saw this as an opportunity to try to identify and learn from her mistakes as well as those of others. There were certain class members in whose abilities she had confidence and she considered their responses to be generally more correct than her own and used them as a reference of how it should be. She also liked to read the paragraph submissions of all students to see if she could understand what they were trying to say.

The **cultura** assignments she found interesting from the standpoint that it was a challenge to find information that she thought others would not know but also find of interest. While she said this did not always help her on the exams, she valued these assignments because "if you are learning the language it kind of helps you understand the different cultures." In this aspect she is similar to a HLL-3 as she is seeking to connect to the target culture. While this is probably not linked to her identity, as it would be for a heritage learner, the motivation lies in accessing a culture rather than just meeting a degree requirement.

The **práctica** assignments she also printed out, both before she completed them and also any feedback she received after submitting her answers. She tried to make absolutely sure that her answers were correct before she would submit them, and she said

that the immediacy of the feedback was a tremendous help. She had doubts about how effective the feedback to these would have been if she there had been a delay in receiving it.

The other assignments of **leamos**, **escuchemos** and **video** she found helpful from the standpoint of understanding authentic language. She reported that as one of the strengths of the course for her. She felt that coming out of the class she was really beginning to understand written and spoken language without "translating to English." The **hablemos** exercises she found a little less helpful than they could have been, because they were not spontaneous. She always prepared her statement ahead of time and then recorded it several times until she thought it sounded natural. She very much liked listening to what other students had done and asking herself how she would have tried to say the same things. Despite her comment about wanting the **hablemos** exercises to be more spontaneous, she only participated in the **chat** once. Her reason for that, in addition to the difficulty in scheduling with someone else, was that she was worried about getting "stuck" and they weren't worth enough points to really make a big difference in her grade.

She said that her instructor was the most interactive professor she had ever had in an online course, but that the class could have used more communication. She did acknowledge that the chats perhaps would have provided that, but the points were not incentive enough for her to overcome her hesitations. It is interesting that even with all the intrinsic motivation she brought to this course, she still needed to have the **chat** assignments worth more to move them up higher on her priority list.

4.1.6 Participant #6

The sixth participant was male between the ages of 35 and 44. He referred to Spanish as "the language that I was born into but not utilized for much of my life." From

the information he gave it was not immediately clear in which category of heritage language learner he was. He took some Spanish in high school and has family members who speak it, but does not consider himself fluent. In fact, his stated goal for taking Spanish was to reach the point in which he could communicate as well in Spanish as he could in English. Due to that I would consider him to be HLL-4 as his heritage language did not seem to be as much a part of his identity as did English. In addition to the interest in his heritage language, he stated that he was pursuing a degree that required two semesters of a foreign language.

He described his level of Internet experience as advanced and indicated that he had taken many online courses before these. In fact, the degree he is pursuing is completely online. He reported experience using word processors, spreadsheets, electronic presentations, databases and digital imaging software. He said his computer was a Dell Pentium 4 running the Windows XP system. He accessed the Internet with a cable modem and used Internet Explorer as his web browser. He had to purchase a microphone for the course.

As indicated above, he was in an online degree program, however the university in which he was enrolled did not offer foreign language courses over the web. He was pursuing a degree as a fallback in case he ever got hurt and could no longer perform his current job. While some might have viewed the foreign language courses as just part of a checklist on the way to a degree, his interest in his heritage language made these classes more than just a requirement.

He checked the announcements "pretty much everyday" and readily identified several categories including reminders that helped him "keep on track," information about technical issues and ones that addressed frequently asked questions. He also

reported just ignoring the announcements that he thought didn't apply to him. When asked about the ones most helpful to him, he replied:

> I don't know if call them announcements or not, but I remember seeing some of them here. It had to do when people had… when you started having the same question over and over on an issue. I'm trying to remember. When you started getting into a chapter or whatever everybody… you kept getting emails with the same question about a certain verb usage or phrase usage and then you would put it on here. Just as a reminder that this word gets an accent mark or whatever. That would help out a lot.

When it came to the discussion boards, he found the **questions** forum to be helpful when he had a question or issue over the weekend. He said that he didn't post there as often as other students, because he didn't have as many questions but he did sometimes respond to others' questions.

> I don't think I posted as often as other students did. I did pretty good. I'm the kind of person that can read and pretty much let it soak in and not have too many questions, but every now and then I would post on there and reply to another person's post saying look at this page or this is what the professor meant but kind of not too much.

He would scan the subject lines of the messages to find things that caught his attention, particularly those with trouble getting something to work such as the video player. The other forums served their purpose he said but could be better. He suggested that something that more like a spreadsheet would make it easier to sign up for interviews and arrange chats.

When starting the modules, he would first read the chapter in the textbook and then work on the tutorials online. He used the tutorials to test himself, particularly those with the shockwave animations. He mentioned the ones where you could select a verb and then click to have it conjugated to a particular form and said he would try to guess the form before clicking.

After that preparation he would start the **práctica** exercises and then do the other Blackboard assessments that practiced the receptive skills of reading and listening (**leamos**, **escuchemos** and **video**) and finishing with the **cultura** and then the workbook assignments last because they were the most time consuming. His approach to the **práctica** assignments was to do them with the book in his lap, so he could check things as he did them. He would occasionally save them when he was a little unsure of his answers so he could come back later and double-check his answers to make sure he didn't miss any accents or make other small mistakes. In terms of their contribution to his learning, he said the following:

> It's good practice before the test, the written test because it falls along those lines. Definitely, it makes you…I don't like getting…I like, the points are important and part of your grade so it made me study and be awful sure before I'd hit that submit button because I didn't want to be wrong.

Once he submitted his answers, he would often times send the professor an email with a question about why his answer was wrong or a request to check an answer that he thought was correct but the computer marked wrong.

The other assessments he said he understood pretty much the entire passage, be it reading or listening (with or without the video component). There were usually a few words he didn't understand, but could guess from the context. He took pride in his reading ability, saying that he often came in contact with native Spanish speakers who could not read, so he felt it was a plus that he was getting to the point where he could open "something in Spanish and actually read it." Discussing how these helped him, he indicated the variety of assignments was important.

> They are definitely important. The more, one thing I learned, the more ways you had to learn the language, it helped. Reading it, writing it, which is not on my paper: reading, writing, listening to it and speaking it. Kind of puts it all together.

The speaking assignments (**hablemos** and **chat**) he called them a "true test" to see if one could apply orally the things learned. He would start the **hablemos** by listening to the professor's message a couple of times to make sure he understood all of the questions, because although there was an outline about what to include there was usually a question not identified in the outline. He listened to others' messages, comparing them to himself and even using them to help select a chat partner. He preferred the **chat** assignments because they were more of a challenge due to the unpredictable nature of them. He wanted a partner who was pretty much on the same level as he was, so there wouldn't be long pauses, which he thought might adversely affect their grade. While he said there were technological glitches from time to time, it was never anything that interfered with his ability to complete the assignment.

The workbook assignments he acknowledged were not his favorite things to do, but he doesn't think he would have been as successful without them.

> It [the workbook] has its purpose. I wouldn't knock it because it's just another way of applying what you just read, trying to remember it. Trying to do the right thing and check your answers. Oh, I messed that one up. I messed that one up. It helps you. It's one method of learning. You know how they say, I forgot what the percentage is, you learn by seeing, hearing, writing and whatever. That did help. It was a lot of work.

This participant summed up his experience again by stating that without this online course, he doesn't know how he would have been able to finish his degree program. His schedule was too demanding to be able to attend a face-to-face class.

4.1.7 Participant #7

The seventh participant was older than 54 and female. She reported some previous exposure to Spanish in high school as well as from some family members even though she was not Hispanic herself. She took the class as part of a degree requirement, but was also hoping to develop some basic communicative ability. She was not as

concerned with reaching a level of fluency so much as just being able to help those with whom she came in contact with as part of her job. The nature of that job made her a first point of contact for many people, and she needed to direct them to the appropriate area for more assistance.

She identified herself as between an advanced and expert Internet user and had taken multiple online courses as well as those with a web presence or were web-enhanced. She described herself as having had "a ton of online classes." She worked on a PC, running Windows 2000 operating system and had to purchase a microphone in order to fully participate in the course. She accessed the Internet through a dial up modem and did not report any problems due to the slower connection speed.

She was drawn to the online courses due to the combination of her work schedule and her responsibilities to her aging mother. In fact the first time she attempted the first semester course, she had to withdraw because of her mother's health. The following year she re-enrolled and completed both semesters. The flexibility of distances courses has made it possible for her to complete her degree while still working full-time and caring for her mother. She mentioned that the "save" feature on Blackboard assessments was particularly helpful as it allowed her to deal with interruptions without losing previous work.

She checked for announcements on a daily basis, because she liked to stay on top of things. The announcements, particularly reminders of deadlines, helped her keep up with the class as described in the following quote.

> I think that this is one of the most important things about the online class… is to check the announcements because that's how you'll know what's going on. That's how you knew what was going on really by checking those announcements.

Apart from reminders, she also mentioned that there were times when the professor answered questions from student emails that with a general announcement that

could help everyone. She found these explanations were useful to her and assumed that others did as well. She also mentioned that the archiving nature of the announcements was particularly helpful since she could refer back to previous ones no matter how long ago they were first posted. When she had a question, she said that she usually looked back first at the past announcements to see if it had already been answered in an announcement.

In terms of the different forums, she found that they served their intended purposes well, and found the **questions** and **workbook postings** were quite useful. She took advantage of them to seek answers to questions and also as a way to compare her responses to those of others. She clearly valued what others posted as a resource to check when she had any kind of question, be it about the language or a particular assignment. She looked at the **questions** forum for answers just as she did the previous announcements and pointed out the ability to have a "conversation" back and forth with others in this forum. When posting workbook assignments, she compared her answers to those posted by others.

> So it kind of helped when you go and… because we could view other students' things and it was kind of a learning experience to see that everybody didn't have the same answers on there… I'd go back and look at my textbook and go back and read to try and see if I was right or they were right or sometimes there was more than one way to do it.

When starting a module, she followed the order the assignments were posted in for the most part. She said that she deviated from that on an occasion or two but found that didn't work so well. She clearly believed that the order had been purposely designed by the instructor as the proper way to learn the language. She mentioned using the tutorials and the textbook to do the workbook pages first. The tutorials she reported using more than the textbook and called them "less confusing," although when asked if the

tutorials were easier she described them as a kind of extension of each other, saying they "are really kind of like one."

When asked about the contribution of the **cultura** assignments to her learning, the first response was "it made me want to travel." She then elaborated that the purpose of that travel would be to "learn more about the countries and about the cultures." For her these assignments appeared to represent a seed that might one day potentially sprout into new opportunities for learning. In addition to this, she spoke again about reading what others posted, and suggested that was not only a way to learn more, but to also connect with the other students and learn about them.

> But by reading other students, like I said, I learned about other Spanish speaking countries also. I felt even a lot things they posted on the web, I learned the way they thought, what type of person they were, you know, what they liked. That's important I think in any class, especially an online class, because you can't see them. You can only read, and if you don't participate on the Blackboard then it's like you're all alone. And that was good to be able to read theirs, to participate with them on the Blackboard, that we could communicate through the Blackboard from student to student or student to instructor.

When it came to the speaking assignments, both **hablemos** and the **chat**, she often compared herself to others, and while she noticed differences in speaking ability between herself and others, the only time she was ever bothered by that difference was when chatting with someone of a higher proficiency. That discomfort was not due to feeling inadequate as might first be suspected, but rather at inconveniencing her chat partner by making her wait or repeat. As a result of that, she felt that it was important to chat with someone closer to her own level. She thought both assignments had their own strengths. The **hablemos** allowed her to listen multiple times to the professor's message, which she viewed as an example of proper Spanish, as well as hear everyone else's response. The **chat** in contrast was more unpredictable, so it was more like actually speaking than reading a prepared script for **hablemos**.

There were two elements of the **práctica** assignments that she most appreciated. First was the "save" feature as mentioned earlier. Whether it was to answer the phone, care for her mother, go back to study more or even just to get a drink of water, this convenience was important to making progress through each module smoother. The feedback was a great support as well.

> That explanation was important because it gives you a better understanding. It's not like it's just an X, and it's wrong. You see, there's an explanation there and you can read the explanation. You can go back to read the question, and it makes more sense that way.

This feedback was another source of instruction for her. In fact she mentioned being able to go back in the textbook or on a tutorial to double check the feedback, and "it was there." She had a slightly different view of the feedback for the **leamos** exercises. Rather than instruction, she saw that as more of confirmation that she did understand the reading passage. If she didn't understand something, she would seek out other resources until she thought she understood, and the feedback would validate that she did perhaps boosting her confidence.

She thought the **escuchemos** and **video** exercises were similar, and they both taught her to pay attention while listening. The **video** ones were a little bit trickier for her, because there were other things to which she needed to pay attention. She did not consider them distractions when asked about that, but just said it was more information to process. She did credit these assignments with an improved ability to understand people at work.

While many students avoided the extra assignments that did not offer the reward of points toward a grade, she took advantage of every opportunity to test herself. She liked any exercise that would provide an opportunity to check what she had learned, but specifically mentioned the crossword puzzles as a personal favorite. The other non-point

assignment which many others considered unnecessary but she took advantage of was the end of module **reflection**. She thought it important to show the professor that she was working and learning and found this another place to get to know the other students a little better and learn from them.

As she equated learning with practice, this course was perhaps tailored to her learning preferences. She suggested that it was particularly good for individuals who were not comfortable participating in a classroom.

> I've noticed in some of the classes I've been in, regular classes, a lot of people just sit. But an online class you have to, you're almost forced to, so there's much more participation in the online class than an in-class class. Because in-class class you have a certain number of students who seem to raise their hands all the time, but in an online class, everyone has to participate.

She also suggested that the nature of an online course forces one to "really buckle down" in order to succeed and that is a good fit for learning a foreign language because it also requires a lot of hard work.

4.1.8 Participant #8

This participant was female and younger than age 25. She had previous experience with Spanish from some high school courses and also had friends who spoke the language as well. While there was a four semester foreign language requirement in her degree plan, she also wanted to reinforce what she had studied before in order to better retain her knowledge of the language for the long term. Her previous experience with Spanish is what led her to choose that language for the requirement, and she just loves the language.

She rated herself as an advanced Internet user and reportedly had taken about 20 courses that utilized the Internet in some fashion including five that were completely taught online. She used a PC laptop with windows XP and used Internet Explorer as her

browser. Her Internet connection was via DSL and only had to purchase a microphone. She considered herself an experienced computer user having worked with word processors, spreadsheets, electronic presentations and databases.

Her decision to take this course online was rooted in convenience. She is a student at a nearby four-year university and works as well. She thought that being able to do the work from home would be easier. Since the end of her Spanish 2 course, she completed Spanish 3 and 4 in a face-to-face environment. She commented that there was a difference; primarily that there was more exposure to spoken language, both from the professor and other students. Despite those differences, she said that if she had to it to do over, she would do things the same way.

She checked announcements a couple of times each week and sometimes did so daily. She found them particularly helpful as reminders of due dates for different assignments and exams. In addition she commented that there were often little explanations about different grammar points that the professor often posted in response to questions received from other students in case "some of you might have the same question too." Those additional explanations "helped it sink in better." In terms of the number of announcements, she thought it was about right.

> It wasn't like I was bombarded by announcements, and then it wasn't like there was too few to where it was like "Oh my God, what are we supposed to be doing?" I rarely… I think I only had to email the teacher like… out of each of the semesters I took I probably only had to email the teacher once each one. And I was just because maybe I couldn't find a partner to talk to or something like that. But just all of the announcements they gave on Blackboard were so helpful that even then I didn't have to remark them or email him, which in an online class you kind of expect.

She acknowledged that there could be a point where there would be too many announcements. That point would be when the announcements started repeating themselves. Her opinion was that one reminder about an upcoming test would be good,

but college students should not need a "countdown" of announcements about the same thing.

When it came to the forums, she reported them as helpful. The housekeeping ones where she signed up for a test center, interviews or arranged chats with other students accomplished what they needed to do and were probably more helpful to the professor than to anyone else, but the most helpful one was the **questions** forum. While she did not post frequently to it she often went there when she had questions and found that particular question already answered for another student. She said about this forum:

> I think it contributed very well, just because it kind of… you know when your in an Internet-based it is mostly self-paced, you know when you're kind of by yourself so it allows you to kind of interact with other students and see that you're not alone. You know? Like some of the question you have, they also have. And some of the concerns they have you and they also have.

She found the **workbook** forum was also a useful way to submit the open-ended portions of the those assignments, and that allowed her to get feedback from them more quickly. Unlike the **questions** forum, she did not read what others posted here.

When she started a module she first made a decision about whether or not she needed to look at the tutorial for a particular grammar point. She would do this by scanning the textbook and if she was comfortable with that topic, she would skip the tutorial and just use it as a reference later on. After reading the tutorials that she didn't feel comfortable with she would do the workbook pages before moving on to the **prácticas**. She then did the other assignments generally in the order in which they were listed on the assignments page, occasionally skipping one if it presented problems.

She found the tutorials helpful when she needed them and made mention of a few specific ones that presented material that was not covered in her high school class. She saw the objectives as providing an idea as to what to expect on the tests and the guiding questions helped with the actual practice. She saw the preparation as the professor talking

to her and especially liked the ones with the interactive elements and described them saying, “it’s like I am talking to someone but they are not there.” She reported that these really helped her learn because it became more active, more than just reading something.

The contribution of the **cultura** assignments was that they “put you in the whole mood” and helped you connect to the culture surrounding the language. She valued this as part of the whole language experience but read other’s postings rarely, mostly just to make sure she was doing something least similar to what others were doing. Likewise she did not look at postings of other students in the **workbook** forum, so the greatest point of contact with other students for her aside from the aforementioned **questions** forum was in the **hablemos** and **chat** assignments.

She did listen to what others posted in **hablemos**, however, it was just to see what ideas they decided to talk about and determine how long she should make hers. She used that contact with other students for support with the task rather than comparing herself to them in terms of language skill. Re-recording herself was standard for her, generally two or three times for each assignment, as she viewed this as a practice makes perfect opportunity for speaking. The **chats** were difficult to arrange with other students, and she felt a little uncomfortable working with someone more advanced than she was, but not enough to stop doing them altogether. While chatting with someone of similar ability was more comfortable, she reported learning more from chats with more advanced speakers.

The other time she spoke about being comfortable speaking was when discussing the feedback from her professor on the workbook assignments. She said that made her more confident and comfortable, and that was important to her as indicated by her comment: “if you don’t feel comfortable, you’re not going to speak it.” She also took advantage of the answers in the back with which she checked herself usually item by item unless she felt confident about the section.

The quick availability of feedback was important to her not only with the workbook but with the **práctica** assignments as well. She viewed the immediacy as critical to understanding her mistakes stating that sometimes even waiting just one day could be too long.

> If you wait a day, you know, you might have a bad day so you might not even care as opposed to if you do it right then, okay, you were doing your homework so you were in that whole mindset.

She identified their contribution as helping with tasks that needed to become automatic such as conjugating verbs or spelling. The **leamos** exercises she saw more as vocabulary practice and another opportunity to learn about Hispanic culture from the context of the reading passage that were an example of authentic language. Since reading was one of her strengths, she didn't recall making many mistakes or seeing much feedback from those.

Just as she looked at the reading passages as examples, she also considered the **escuchemos** and **video** assignments as examples of how Spanish should be spoken. She usually listen to the **escuchemos** message twice, either before answering the questions or once after to check them. She generally understood the whole thing as she did with the **video**, but added that the latter was a little more difficult because there was more to pay attention to than just the conversation.

In terms of the extra assignments with no point value, she reported using the vocabulary crossword puzzles when she felt that she needed more practice with the vocabulary. While she did post reflections, which she said helped her identify her strengths and weaknesses, she did not read those posted by others because of the time factor involved in it. This was a consistent theme for her. When the opportunity to read what others had posted, she usually let it go preferring to spend time on her individual

assignments. The only time she read anything posted by other students was when she had a question.

She very much appreciated the variety of different assignments in the course and found them more balanced than her experience in Spanish 3 and 4 in the classroom. Many of the practice items offered in the classroom she said seemed "like more busy work" and less interactive. When asked more about how interaction helped her learn, she again returned to the idea of variety.

> On here you get exposed to different people who actually know Spanish and you actually speak it. You know, on the videos and the hablemos and even listening to the teacher talk so you get a variation of different people who are talking Spanish, which is better because you get to learn. Okay, you know, people have different accents so you get to be more aware of how people talk and how they are going to pronounce things.

She described her experience in Spanish 3 and 4 as having more lecture and less interaction. Her preference was clearly to the web courses, and she even said that she recommended the course to several people. She did, however, add that some kind of background in Spanish was important.

4.1.9 Participant #9

The ninth participant was female also and between the ages of 25 and 34. She had taken Spanish in junior high and high school and had Spanish-speaking grandparents. She had a foreign language requirement to fulfill, but she also wanted to improve her fluency so that "they [her grandparents who don't speak much English] don't always correct me." This clearly identifies her as an HLL-4 since she had the individual motivation of establishing stronger ties to her heritage culture, represented by her grandparents. She mentioned this reason for taking Spanish before the degree requirement, and from the her tone it could be speculated that she would choose to take Spanish courses even if they weren't part of her degree requirement.

She classified herself as between novice and advanced when it came to using the Internet, but had substantial computer experience. She reported having worked with word processors, spreadsheets, electronic presentations and digital imaging. She worked on a PC running Windows XP and used both Internet Explorer and Firefox as her web browsers of choice. She had a high speed connection with a cable modem and had to purchase a microphone for the course. While she had taken five courses that used the Internet previously, she described them as in the categories of just having a web presence or being web enhanced.

She was hesitant to take the class online, but her need for the course overcame that. So she was nervous about taking Spanish as a web course, but her work schedule made taking a classroom version impossible.

> It just didn't seem like you could really learn the foreign language part without seeing it or without hearing it more or without having that constant interaction with the professor. So I was a little bit nervous.

At the time of the interview she was currently enrolled in Spanish 3 in a classroom and reported that it was not as convenient. Because of her schedule there were times when she was unable to make it to campus and that day was just lost. With the online class, if a scheduling issue arose it wasn't a problem because the nature of the course meant that she could just get back online later in the day or on the next day and do what she had planned to do previously.

She went online daily to check her announcements because the professor did post messages their on a regular basis. She categorized them as reminders and tips. The reminders alerted her to upcoming deadlines for assignments or exams and while she said they were useful, the tips were most helpful.

> The tips helped a lot, because if you didn't understand just reading the textbook, because in the textbook you couldn't… like when you're doing the textbook itself, there's no answers to it. So you don't know if you're doing it right. You

> think you are, but you're not too sure. So when you'd go back and look at the tips he'd give you for the whole week, it just made more sense, like "yes I am doing it right" or "no, I'm not doing this right I need to look further into this to see what I'm doing wrong."

She referred to these tips as "reinforcement" from the professor that complemented what she read in the textbook and practiced in the workbook. While she considered them an important part of the course and thought there were the right amount in this class, she did say that there could be a point when there would be too many announcements that, when reached, might cause students to start ignoring them.

She reported that the different forums in the discussion board worked well. She did seem to distinguish between to kinds, those where you just posted information for the professor and those where you posted messages back and forth among students. Of the latter, she said:

> It made me realize that I'm not the only one that had questions. So if I didn't feel comfortable going to the professor for whatever reason, then I could always post it on there and somebody would answer… normally within a few minutes, so that was really good.

These exchanges with other students helped create a kind of bond, an "Internet friendship," that translated into a support system for when she needed help.

When approaching a module, she would begin by printing out the tutorials. She would follow the module assignments in order starting by reviewing the tutorials and then using them along with the textbook to complete the workbook activities. If pressed for time, however, she would jump around a little, doing the ones she knew she could do easily before the others. She identified reading and listening as strengths, so it is likely that she was referring to those kinds of assignments as well as **práctica** exercises over grammar that she already knew.

The tutorials she would just review, since she had previous experience, as a refresher, but as the semester progressed she found that she was spending more and more

time with them as the material became more challenging for her. Since a lot of this was review for her, she skipped the objectives and guiding questions, preferring to dive right into the preparation. She liked that they were in English as they backed up and reinforced what was presented in the textbook. At first, since she was using printed copies, she did not realize there were interactive pieces in some of them, but once she noticed them (due to a cursor change when it passed over one of them), she found the conjugators especially helpful in trying to learn verb forms. These were an extra resource that provided an opportunity to reinforce what she was learning.

> I would do like a spreadsheet of all my verbs and then I would fill it in myself and then I would use the conjugator to make sure I had them right.

She did the **cultura** assignments to get the points, but didn't really see their connection to the rest of the course. While she acknowledged that they were tested on some of the cultural materials and that she enjoyed looking up the websites, she confessed to not reading what other people posted. This was consistent with her earlier comments about only seeking out interaction with other students when she had questions.

She would, however, listen to the **hablemos** assignments posted by other students. She would often reply to a fellow student rather than her professor and chose the one with the question that interested her the most. She did enjoy listening to them, and doing that made her feel like she knew those individuals a little better. This played into how she would pick a **chat** partner. She wanted to chat with someone who was serious about class, and used those **hablemos** messages as a way to figure out who fit that criteria. She would also listen to her own messages and re-recorded them on occasion when "it didn't sound right." About their contribution to her learning, she described the professor's message as a model of correct speech that should be emulated. The **chats** she considered similar in some ways, but the primary difference was in their unpredictability. Even

though there was an assigned structure, the participants often got off topic. This was only a problem if she was in a hurry, but was always good speaking practice. Her preference was to chat with someone on her own level of Spanish because she felt uncomfortable "slowing down" someone on a higher level and awkward with those of lesser ability who didn't understand her. These were valuable to her both for the obvious practice speaking, but there were times when she also received feedback from other students.

> Oh yeah, we get feedback from each other. If you didn't say a word right they would say "You did good on that, but I don't think that's how you say the word, I think the way you say it is this way." Or if the other person is not comfortable with correcting you then they'll say it the correct way and you're like "oh wait I must have said it wrong." And so you just go back and forth like that.

The **práctica** assignments were another area of the course that she mentioned in regards to having feedback. She would do these with the textbook open and her copies of the tutorials out as reference materials. Once she had submitted her work, she looked at the feedback for any that she missed, and it was the feedback that she considered the most helpful part of these exercises.

> It was really good, because it was just like if you were talking or submitting your answers in a classroom with a professor. Like if you submit a wrong answer to your professor, he's not going to wait weeks to say "Oh, that was wrong." He'll tell you right then and there, so that was really good, the feedback.

She commented that these assignments were good at identifying her weaknesses and then addressing them through the feedback.

She reported that the **leamos**, **escuchemos** and **video** assignments played to her strengths of reading and listening. She would read the questions before reading the passages, start answering the questions and then go back and re-read if necessary. Sometimes the passages were a challenge, but that just meant it would take her a little

longer to understand them. She regarded these as examples of real Spanish and found the topics interesting. Likewise she considered the **escuchemos** and **video** as examples of proper Spanish and really didn't think there was a difference between the professor on the **escuchemos** and the native speakers in the **video** assignments. Also with these she read the questions first and then listened to or watched the materials. The visual clues in the **video** made them a little easier to understand and she only had to watch them once. She did like the experience of being exposed to different accents through these exercises.

When it came to the assignments without any kind of a point value, she liked doing the crossword puzzles to practice vocabulary. She thought these were a good extra step for those who needed it. She did not post any reflections of her own, but she did read what others posted there. She was particularly interested in what problems others were having and saw this forum as a place for "venting" when students didn't understand something.

Overall, she liked the class and said that if she could go back and do it over again she would take Spanish 1 online as well.

> Because you have a lot more, you get a lot more out of it than you do in the classroom. In the classroom it's just strictly the textbook… from my experience, the Spanish 1 that I had was strictly the textbook. We didn't really conjugate verbs, we didn't really go over the cultura at all. So I guess maybe that's a reason why it wasn't really important to me also. Just the only time we really tested ourselves was on the exam. Like the little prácticas, we didn't really have that. It was more just speaking. It wasn't seeing how it was written, it wasn't… it wasn't really anything else. It was just strictly the textbook.

For her, there was not any one kind of interaction that she said made bigger contributions than all the others, but rather it was the variety of interactions.

> I can't really learn something just by reading it. I have to do it, I have to see it done, so there… and with this online course there were all kinds of different things. There were the video, there was the listening parts, the speaking parts, the

> reading parts. So all of it played in together so that you could… anyway you learned it's there, there's no way you couldn't learn it.

She even considered interviews with the professor, which were used as a speaking test, to be useful interactions.

4.1.10 Participant #10

The final participant was also female and under age 25. She reported three years of previous experience with the language in high school and said that she had numerous friends and family who speak Spanish. Her degree plan required four semesters of a foreign language, and she sees it as a necessary part of career preparation, suggesting that without some ability in the language she might not be able to find a job in her profession.

She rated herself between novice and advanced as an Internet user. She used a PC laptop running Windows XP and connected to the Internet via a cable modem. Her web browser was Internet Explorer, and she did not have to purchase any additional equipment for the course. She had substantial experience with computers having used word processors, spreadsheets, electronic presentation, database and digital imaging software. At the time of the interview she had taken eight courses that used the Internet including a combination of those with a web presence, some that were web enhanced and others that were completely online.

Web-based was not her format of choice, but she had given birth just days before the start of the semester and could not attend classes. She was clear that she would have preferred to take the course in the classroom, but given her family circumstances it just wasn't possible. She had done well in Spanish 1 and did have exposure to Spanish both at home and work, so she was relatively comfortable that she could be successful.

She checked the course for announcements daily, saying that she was afraid of missing anything. She categorized them as schedule updates, reminders and tips. Schedule updates included things such as deadline extensions or some other alteration to

the structure of the course. Reminders were useful in keeping her on task, and the tips involved grammar explanations. Occasionally there was an announcement that appeared to be the result of a question emailed to the professor that had a general application to the class as a whole, for example, the clarification of an assignment's instructions. She found the reminders to be great time savers as they saved her the trouble of digging deeper into the course structure to find the embedded deadlines. She thought the number of announcements in the course was appropriate and while she found them helpful, she did believe that there could be too many if they ever became redundant or just unnecessary.

The forums in the discussion board were also convenient time savers. She used the **questions** forum to look for answers to her questions before she emailed the professor. That saved the time of sending the email and then waiting for the reply, a process that could take several days. The other forums served a similar purpose whether it was the one where they posted messages to set up chats or those that just provided the professor with information like what test center the students wanted to use or reserving times for interviews. While the latter really didn't save her any time, she speculated that it saved the professor time.

When starting a module, she printed out the assignment list first and then did what she considered the easiest things first. She would begin with the **cultura** assignments since they were "more open to what you could do," that is to say that there was more freedom to explore different websites and write about what interested you. From there she did reading, listening and video assignments as they played to her strengths. The speaking and writing exercises she saved for last.

While she liked the **cultura** assignments and did them first, she didn't really see how they connected with the course objectives. She would seek information about the different countries that she found interesting and that she thought other students would

also find interesting. An example of that would be the history of El Salvador during World War II, specifically their providing a safe haven for Jews fleeing the holocaust. She believed that interest played an important role in learning by helping people remember things better because they were interested in them. When asked why she was trying to interest others in her assignment, she said, "Interaction, I think I may have been seeking interaction with other students."

She thought the **leamos** assignments were easy but good examples of everyday Spanish. She liked the content of the reading passage but thought she would have gotten a little more out of them if they had been more difficult. The **escuchemos** and **video** exercises also provided examples of authentic language. When doing the former, she would read the questions first and identify key words to listen for. She would listen multiple times and said that she sometimes had the message memorized by the time she was done answering the questions. The **videos** were easier to understand because of the added context. The multiple input from audio, video and even written text that was identified as critical vocabulary made these easier to understand than the **escuchemos** for the most part. She did comment that the production quality on some of the episodes filmed outdoors made it difficult to understand sometimes and the speed with which some of the actors spoke also could make portions more difficult and required her to listen as many as four or five times.

The workbook pages she found tedious and often unclear in the instructions. She liked the idea of receiving feedback on items posted in the discussion board, but felt frustrated that a lot of the mistakes her professor pointed out resulted from not understanding the instructions. The answers in the back did not help enough, because they couldn't do more than just tell her where the mistakes were. She wanted to know why they were mistakes to begin with. When asked if she ever looked at others postings

for help to understand what to do for a particular section, she reported feeling uncomfortable doing that. She felt that it was borderline cheating, since the professor had given no indication as to whether that was acceptable or not. So she checked only on rare occasions when she was completely at a loss for what to do, and afterward would feel conflicted as to whether or not what she had done was morally correct.

The speaking assignments, **hablemos** and **chat**, to prepare for them she would look at her module print out and compose some sentences based on what the assignment required. With the **hablemos**, she would then listen to the instructor's message several times to make sure she understood and then listen to what had been posted by other students to get a feel for what it should be like. She also checked the length of what others posted and used that as a guide. She liked these assignments and found them very useful. She preferred the **hablemos** to the **chat**, because you didn't have to rely on another person showing up. While she did find **chats** with someone of a similar level or higher to be useful, she thought there should be something that students could do if they were stood up by the chat partners. She definitely wanted more **hablemos** assignments.

The **práctica** assignments were great practice according to her. While she didn't like how nit-picky Blackboard could be at times, the points at stake really made her pay attention to detail with her answers. It was somewhat frustrating to have to email the professor about points that she believed she earned, but that Blackboard counted wrong because of a period at the end or a capitalized letter that should not have been, or vice versa. Despite that, she said that these were critical to her learning.

> It was really good practice. Especially for the test, because if I could just go back and remember filling those in it really made the test easier, especially the verbs and the different conjugations of the verbs, cause that way when I had to fill in the…there were questions on the test "use this verb in a sentence," and if I could remember using it in the práctica then it would help.

When starting to do these, she would get out the tutorials and her textbook and work on all three together.

The **tutorials** she found to be very helpful. The objectives helped put the **práctica** exercises in context for her, and the guiding questions provided even more structure and specifics. She preferred the explanation in the tutorials over those in the book because some of the instruction was often in Spanish. Also, the preparation part of the tutorial provided links to earlier tutorials where there was a connection to things done previously.

Sometimes there would be things in the preparation that were not in the book, and that did help. There would be not only examples, but occasionally I think you put notes there that say: "Just a reminder, you need to do this or you did this in chapter "duh, duh, duh, duh," well the book doesn't tell you that you did it before. So if you have something to compare it to, it makes it a little easier, because it's something you've seen.

She used the tutorials as reference materials, constantly referring back to some, particularly those about verbs and verb conjugations. While she liked the interactive parts, she often attempted them before really studying the preparation and as a result made many mistakes. She clearly remembered some being more useful than others and didn't find that portion essential per se, but it depended on the content.

In terms of the extra assignments that did not count for points, she said that time was really an issue for her so she didn't do many of them. She specifically mentioned doing one of the crossword puzzles to practice with the vocabulary, but time simply did not allow for it. She did, however, make time to read the reflections that others posted, even though she didn't often post her own. When asked why she didn't post her own reflections she said "I feel like the attitude of most students is that they really don't care what you have to say about it." When she did post one, it was because she was angry

about losing points when someone else didn't show up for a chat with her. She said it was comforting to know that she was not the only one having problems from time to time.

> It's sort of like a hurt shoulder to lean on. I was like "yeah, they didn't like that either." It was satisfaction almost or at least it helped me see that I wasn't completely off based that other people were having a hard time with the same things I was and in that way it helped me from being totally discouraged. Sort of a venting of what is working, what is not working and it's not working for you either. It makes you feel not so bad about it.

She also said that even though there was an option to post anonymously, she still thought that somehow the professor would know if she complained about some aspect of the course.

While she would have preferred to take the course in the classroom, she did say that she found this particular online course to be very comprehensive and interactive. She considered that everything she typed was an interaction.

> I felt very interactive with the professor even though we weren't in the classroom because there was constant correspondence, constant answers, constant something going on that website and so in that sense I felt that was constant interaction and even though we weren't in person.

That constant interaction was what kept her going. She thought that a delay in feedback would have made her feel that it was not so important to be prompt with her own assignments and that could lead to procrastination. On the negative side of things, she did say that she did not feel as comfortable speaking as she had hoped and suggested that more **hablemos** activities be included in the future. She also credited some of her success to being well prepared from Spanish 1, and that she didn't think students with a shaky foundation would be able to succeed. Overall, she would not have taken the online course if she didn't have to, and even now thinks that, for her at least, doing a course in a face-to-face class correlates to higher grades. Despite some of the frustrations that she experienced in it, she said that she "really enjoyed the course."

4.2 COMMON THREADS

When taken individually, each of the participants present a unique picture of an online learner, however there are some common threads. They include: 1) the value of feedback that explains mistakes, 2) the use of message boards for getting help from other students, 3) the potential value and inherent difficulty of chats, 4) the role and value of announcements, and 5) the value of the social presence created by the instructors.

4.2.1 Feedback needs to explain mistakes

Of the ten participant, only the fourth one had a negative response to the feedback. She was the heritage learner taking the class to meet requirements for course hours for financial aide and because "I thought it was going to be an easy A." Due to that attitude, whenever she missed something, particularly little things that she considered inconsequential, it was just frustrating. Because of her level of fluency, Spanish was her native language, she didn't feel like there was really anything for her to learn from the feedback. All the other participants, however, expressed very positive experiences with the feedback and found it very helpful.

Excluding participant 4's frustration, there were really two kinds of comments about the feedback to the **práctica** assignments, those about the content of the feedback and about the immediacy of it. The first participant liked the brevity of the explanation.

> I liked the feedback because… it… feedback, I thought, explained it very briefly, but very direct… If instructors could give you feedback like that, just very point blank, right in your face and no discussion, end of subject, it would be so much easier to learn in class. I'd really like that.

Participant 2 was brief with her description of the feedback, but indicate that it was also right to the point.

> I thought it accurately described, you know, what I had done wrong… If I missed it I would just glance it and go, "Oh, that's it!"

The third participant noticed that the feedback not only addressed the mistake she had made, but anticipated other kinds of mistakes as well.

> It would tell me what I did wrong and it gave you the right answers, so stuff like this, yeah, so that you would make sure when you were studying okay this is why and this is the tense and the little extra note… Wasn't there sometimes also an extra note, too? I guess you kind of figured what kind of answer we might have put, you know, so this is why you shouldn't have put that. That helped, too.

Participant 5 likewise commented on the feedback explaining why the answer was wrong, but also brought up the idea that having it available immediately after submitting her answers was an important factor as well.

> It's right there in front of your face… It tells you why you are wrong and, you know, you can go back and refer to it… I think that there's something about hitting submit and knowing right away, okay, you did this wrong and you did this right. It kind of…it helps you move forward and help you know what you need to do to know what you need to do to go forward.

The sixth participant's comments also suggested that being able to get that feedback quickly was important to him.

> I'd check it right away to see what I got wrong or right and look at these things here [indicating the incorrect items on the screen shot of **práctica** feedback]… It's good practice before the test, the written test because it falls along those lines.

While participant 7 didn't address the speed of the feedback, she considered the explanatory content very valuable.

> Well, they were good because sometimes I would really think I had the right answer and I didn't, but after you submitted it you could check the answer… So they helped because you could go back and you could review it yourself… So you go and read the feedback. It explains everything to you, and you go "OK, that's why I missed that." That explanation was important because it gives you a better understanding. It's not like it's just an X and it's wrong. You see, there's an explanation there and you can read the explanation.

The eighth participant also addressed the importance of the quick feedback. While she also thought the explanations within the feedback were good, she really emphasized how important it was to see it immediately.

> I think it's very helpful to get feedback right away because sometimes I would "I knew that. Why did I put that?" It kind of reinforces what you learn… I think it's awesome to have it right at the moment, especially in a web based class because if you wait a day, you know, you might have a bad day, so you might not even care as opposed to if you do it right then, okay, you were doing your homework so you were in that whole mindset.

Participant 9 also expressed appreciation for the content and timeliness of the feedback. She suggested that the quick response made the online course feel more like a face-to-face class for that moment.

> The feedback was good. The feedback was really good because it would tell you… If it was wrong it would tell you why it was wrong, not just it was wrong… It was really good, because it was just like if you were talking or submitting your answers in a classroom with a professor. Like if you submit a wrong answer to your professor, he's not going to wait weeks to say "Oh, that was wrong." He'll tell you right then and there, so that was really good.

Participant 10 compared this course to other online courses she had taken and thought the content of the feedback was critical. She also expressed that the quick turnaround for feedback in other areas of the course as well as this automated feedback was important, but that response time wouldn't matter if the feedback was lacking in substantive content.

> It was… most professors don't put a lot of feedback there. They don't put what they wanted to see. A lot of times you would see something like no, that's not right or the correct answer is this, but nothing that says why. I really think that the why is the most important part of it, because you can tell me that's the answer all day but if you don't tell me why, I'm never going to learn it. So I think it was real important to have a reason.

So, excluding the participant who was merely frustrated that her "easy A" was becoming not as easy as she wanted, this study indicates that feedback was an important

kind of interaction. Furthermore, according to these participants the quality of that feedback had two determining characteristics: an explanation that was both brief and clear and immediacy of response. There was no universal agreement over which of those characteristics was the most important, however, it seems clear that it was at least one of those (both in some cases) that really made the feedback beneficial.

4.2.2 Message boards provide help from other students

It is interesting that two of the three forums where the participants most brought up this notion of getting to know other students were not mandatory assignments and earned them no points toward their grades. These included the **questions**, **reflections**, and **workbook posting** forums as well as the voice boards for the **hablemos** assignments. The first two were the optional forums and the last one was where they posted certain assignments from the workbook to be reviewed by the professor. These were exercises for which there were no answers in the back of their workbook, generally because they were open ended or involved paragraph construction. This was not originally designed into the course with the intent of being a place of interaction among learners, instead it was thought to be more of a housekeeping forum similar to the ones where they indicated their testing center preferences or signed up for an interview time.

Participant 1 was the first to mention using this forum for a something other than what it was originally intended.

> That was nice, because there was a few times when I was a little bit confused and I thought, "What is it that I, what are they looking for here? Are they looking for this… this tense or that tense?" You know, and so I would be able to go in there and look [at] somebody else's to see what tense they used and that would help me out a lot. So I think that stuff that's on there is really good and it's interactive.

> And it really helps you if you do have questions and you're able to look at somebody else's and get an idea.

She looked at what others posted to help understand the instructions of the assignments. Since she was only interested in getting enough points to fulfill the requirement on her degree, this ended up being the only interaction she had with other learners. The content of this interaction was about the task.

In contrast, the second participant always skimmed what others had posted. She laughed about being competitive when asked why she looked at them, but she had a different reason for looking at them than just figuring out how to accomplish the task.

> I just wanted to see if I could understand what they were saying and it was a little gauge, I guess, of how well I was doing. Sometimes I would pick up things. It would help me see if I made a mistake. Oh, I should have said it like that or Oh, I didn't conjugate a verb correctly.

She actually was seeking feedback regarding her own posting. With the **hablemos** messages, she also listened to her classmates for similar reasons: comparing herself to them, seeing what she could understand, trying to pick up on mistakes she might have made. As far as the other forums went, she read what others posted there, but rarely added her own message. She did remember writing a "thank-you" to a student who had posted some technology information. Most of the messages she remembered form that forum dealt with technology issues.

The third participant did not put much effort into interacting with other students. In fact the only time she mentioned looking at what someone else had posted was with the **hablemos** assignment. This is a similar format as the other discussion boards, just with audio messages rather than text. She did mention listening to some of what other students had posted in these.

> Sometimes, but not really maybe to just kind of see if I was talking about the right thing if mine was long enough, but for the most part not really.

So on the few occasions that she did seek out this interaction it was to learn about the task.

The fourth participant made her connections with other students primarily in the **reflections** forum. While on the one hand she said it was difficult to feel close to people online, it is clear from the following quote that she did have an interest in at least one of her fellow students with whom she had something in common.

> It just would give me an idea what the others were thinking and what they were coming from kind of… I mean, it's important that others in the class know what the others are thinking. Maybe what they learned from it and then several times there was a person, I couldn't remember her name, a Spanish girl who would post. I would read hers because they were always interesting. She's a mother and I'm a mother. She would say something about whatever the assignment was, but she had a different perspective than I thought about. So, she would always write something in the reflections often and I would always listen because I thought it was interesting to read.

She was actually disappointed that more people didn't post reflections. It is possible that the reason why she thought it was difficult to feel close to others is because they didn't participate in this exercise that was outside of the assignments. For her, it didn't seem like the content of the reflection mattered as much as just the presence it created.

Participant 5 also sought out communication with other students through all three of the discussion board forums and the **hablemos** voice boards as well. For the latter she would actually analyze their speech patterns, verb choice and sentence structure and compare that to what she would have said. She would do the same thing with the **workbook** forum. She saw these as an opportunity to learn about the language. The **questions** and **reflections** forums were more of getting support from fellow students.

> I never perceived the questions portion of the blackboard to be a question to the professor. I think if you have a question for the professor you can email the professor and so this is more about communication amongst all the students and

> you might learn something by looking at someone else's question and another student's answer that you wouldn't have learned otherwise.

She used the reflections to see if others were struggling with the same things. At one point she posted a messaging saying she was having trouble with English grammar, and when no one replied to it saying that they had the same issue, she took that as a signal that she needed to get some extra help. As long as there were others with similar issues, she took comfort and "it made me feel like you're not failing here."

The sixth participant actually read the messages in the **questions** forum just in case he could answer them. He said he would scan the subject lines for anything that he could help with.

> Every now and then I would post on there and reply to another person's post saying look at this page or this is what the professor meant… Especially anything about technical stuff like the video not working or how do you use this.

He also saw this forum as a "failsafe" that he could rely upon if he ever ran into something he couldn't figure out. He said it seemed like there was almost always somebody logged on that would respond in some fashion. He didn't mention reading any of the other students' messages in the **workbook postings** forum. While he might have read some of the **reflections** messages, he didn't really pay much attention to that part.

The seventh participant loved the opportunity to see what others posted, whether it was questions they had, assignments or reflections. She posted a lot to the **questions** forum and also found answers to questions she had already there from time to time. She would ask about anything from technical issues to how a certain phrase could be best expressed in Spanish. She really seemed to take advantage of the messages in the **workbook postings**.

> So it kind of helped when you go and… because we could view other students' things and it was kind of a learning experience to see that everybody didn't have the same answers on there. Everybody didn't, you know, everything just wasn't the same. We were all learning. I'd go back and look at my textbook and go back

> and read to try and see if I was right or they were right or sometimes there was more than one way to do it.

She also listened to other students' **hablemos** postings and compared herself to others. She appeared to take some comfort from being in the middle of the pack so to speak. She recognized that there were those who spoke better than she and those who spoke as well as she, and those who didn't. She had a slightly different take on the purpose of the **reflections** than the other participants. While she also thought they were a good way to get to know some of the other students, she also saw it as an opportunity to tell the professor "that you were taking this class serious, that you were learning, that you appreciated it."

Participant 8 also spent time reading from the **questions** forum especially when she was not sure about what to do for a particular assignment. She found this a helpful part of the course not only as a resource for getting answers to questions, but also because it was a way to connect with other students.

> I think it contributed very well, just because it kind of… you know when your in an Internet-based it is mostly self-paced, you know when you're kind of by yourself so it allows you to kind of interact with other students and see that you're not alone. You know? Like some of the question you have, they also have. And some of the concerns they have, you and they also have.

She did not look at what others' assignments in the **workbook posting** forum, but she did listen to other **hablemos** messages to make sure hers were similar in length and had all the required elements. While she used the **reflections** to identify her own weaknesses and strengths, she did not take the time to read what others posted there.

Participant 9 often posted and read messages in the **questions** forum for more than just seeking answers to questions.

> It was good because it made us realize… well me anyway I don't know about anyone else, but it made me realize that I'm not the only one that had questions. So if I didn't feel comfortable going to the professor for whatever reason, then I could always post it on there and somebody would answer… normally within a

> few minutes, so that was really good… It's really important, because you're not face-to-face with anybody, so you have to kind of bond like Internet friendships with somebody, maybe not even a friendship, but a communication link. So this way you can have somebody to rely on if you have a question.

She also listened to everyone's **hablemos** assignments first, to help her pick a chat partner, and also to establish that bond with others in the class.

> It gave you a feeling of knowing these people. Because they would talk about what they did on their vacation, where they went, how they went, when they went. It just gave me a little bit of a glimpse into who they were also.

She did not make any posts to the **reflections** but did read what was there. She said that it was important again to help her realize that she wasn't the only one with questions and that it was a place for people to vent.

Participant 10 also found the **questions** forum to be a good storehouse of answers and made sure to check it before she emailed the professor with a question. She thought it was a great time saver and anything that saved her time was very useful in her mind. While some participants didn't read others' messages in the **workbook postings** for lack of time or interest, this participant wondered if it was ethical. She thought it was "borderline cheating" and so only looked at them if she was really lost on an assignment. She did not have that same attitude about the **hablemos** activities, however, and listened to those for information about the task itself, such as average length of messages. Like the ninth participant, she also thought the **reflections** forum was a good place for venting. Despite that, she did not often post anything there.

> It's sort of like a hurt shoulder to lean on. I was like "yeah, they didn't like that either." It was satisfaction almost or at least it helped me see that I wasn't completely off base, that other people were having a hard time with the same things I was and in that way it helped me from being totally discouraged.

So while there were things that she chose to avoid because of time constraints, there were some of these interactions that she valued enough to spend time on them even though they did not have an immediate impact on her grade.

4.2.3 Chats can be valuable or frustrating

The chats had mixed reviews. Six of the participants either skipped them altogether or only did one or two. They all commented about how difficult it was to find reliable chat partners who fit their schedule and that the frustration associated with that really turned them off. It was both not important enough of an interaction and not worth enough points towards their grade to justify the time and effort needed to complete them. The four participants who did complete the assignments however, all had very positive comments about the value of it.

> Well, because the first semester I just got used to talking to her and well, it seemed like I was mainly controlling everything and it just wasn't as challenging as talking with other people with different skills, you know, different levels. Some of them were native speakers, so that was good practice with them. (participant 2)

> I think they were both [**hablemos** and **chat**] good, but this one [**chat**] kind of gets you on your toes more because you're going back and forth with somebody else. You're actually conversing now so you're actually putting it all together in a conversation versus to just talking to a machine right here. I kind of liked this one better. (participant 6)

> It was a good contribution, because the more you chatted, the more you learned. And you did chats on each chapter still. There were different questions and stuff for the chat. And it helped you learn, and with chatting it's going to help when you do your test or do your homework. And you can hear yourself instead of just reading something or working on a tutorial where you're not speaking and you're just working and just using the word, writing, but chatting you can actually hear yourself speaking the language. (participant 7)

> You need the chat because if you don't… you need it just to practice speaking more. If you're doing it online you're not as in the class… versus the class. You're… from the minute you get in the classroom, you're to speak Spanish only and so if you're doing it online and you don't have the chat, you're pretty much

> just saying, "I think this sounds right and this is how I would say it if I had to say it." (participant 9)

So what made the difference between those who thought the **chats** were very valuable and those who decided it was somewhat or completely not worth the time? Two of the participants just made the decision that they did not have the time for them. One wished she did.

> But I really think that… I like that chat thing, I just wish that I could… I think I would have done a lot better if I would have been able to participate in that. I just didn't have time. But I think that was probably one of the most important parts of it, because you are forced to talk to somebody and I think part of the horror is to go out there and make a fool of yourself, and try talking to somebody and have them laugh at you. I think the chat's probably invaluable, but I didn't get a chance to do it. (participant 1)

While the other admitted that it would probably have been beneficial, she just couldn't fit it in her schedule and "what are they, five points each?"

> I only did this once to admit because, you know, however many assignments and however many classes you are taking at any given time, I had to eliminate some assignments… It was the last thing on my list of things to do and if I had enough time to do it I would do it and if I didn't I wouldn't, but I think I did this once and I think I preferred this [**chat**] over this [**hablemos**] because this is far more challenging and maybe that's why I didn't go back and do them. (participant 5)

Others had a bad experience of one kind or another that coupled with how difficult it was to co-ordinate schedules made it not worth it. Those experiences included being embarrassed or uncomfortable chatting with someone with a higher ability, having a partner refuse to do any more chats, and having people not follow through on chat commitments.

> Me and the girl who I got together with… we just kind of read through it. She was really good though. I think she knew Spanish, so I kind of felt like out of place because I felt that she knew but I didn't… I was kind of embarrassed because she's probably thinking she's bad at this. (participant 3)

> I think my partner didn't like it because I spoke better Spanish than he did, so he said it wasn't fair. So I told him, "yeah, verbally, but learning it we are the same." I explained to him that I'm equal to a non-speaker in the assignments, but he still didn't want to do any more chats with me. (participant 4)

> I probably only did two or three chats the whole time because people's schedules are so varied. Sometimes I would be waiting there and they would never show up. Sometimes I would do it myself where I'd just talk about whatever… When I did talk to other people it seemed like they were really advanced and they were like going off and I'd be like, "Whoa, what did she say?" Because like I can understand Spanish but if people are really talking fast I can't understand it so that exercise I don't know how really helpful that was… It just felt uncomfortable… I guess what the problem was that there they weren't talking about stuff specifically in that lesson, so they were using words and stuff that I had never heard of and we hadn't covered so it was kind of hard for me. (participant 8)

> I liked the hablemos more, but I think that's because I didn't have to depend on another person because I missed a lot of the chats because I couldn't get a hold of someone to do it with me, so I didn't have to depend on someone for that grade… I was very frustrated because the person I was supposed to chat with didn't show up so I had lost the 7 points. And it happened like three or four weeks in a row. (participant 10)

While most of the participants acknowledged there would be a benefit to this kind of interaction, there were a lot of obstacles to overcome. All the participants commented that coordinating schedules was a challenge and that the level of the person with whom they chatted also made a difference. Those with positive experiences reported chatting with someone more or less on the same level. When the difference in level became pronounced, then problems began to arise.

4.2.4 Announcements helped keep students progressing

All participants said that the announcements were very helpful, although they seemed to notice different functions for those announcements including: reminders, tips and technical support. A common thread beyond just the different kinds of

announcements they noticed was how it impacted their learning. Nine of ten participants specifically mentioned something about not missing something or keeping up or "on track."

> When I saw those reminders I knew and I went immediately to my calendar, put them in there even though it was 2 months before that. That way I know that anything else that comes up I can schedule around that. (participant 1)

> Well, I thought that in many cases it was helpful to, you know, let us know what was going on. But, you know, I checked the announcements and all the other areas to make sure that I didn't miss any deadlines. (participant 2)

> I think they did help but like we said the tips, you know, were something for you to remember to go back when you studied for the test and then the deadlines, because you are not going into class so you can easily forget, you know, when is the test if you didn't mark it down. (participant 3)

> I was afraid I would miss something. Being that I just went back to school a little over a year ago after a long, long time begin away, so I was afraid not being able to handle it so [I] paid extra attention. (participant 4)

> I guess just the sense that I'm keeping up and if I missed anything. I guess I've come to rely too much on the announcements instead of going back and looking at the syllabus or the deadlines, you know, for assignments. (participant 5)

> They helped me keep on track. I think I was pretty organized so like the deadlines and stuff I already had that written down, so I imagine there's an overall purpose for helping all the kids. I say kids, but students and stuff that were within that class because I got to know some of them and some of them couldn't remember when's the next test. I would get emails and let you guys know when the next test is, when it was due and I'd go it's right there. Go over to the front page. It says everything, so it helps other people more than others but I would definitely read it to make sure I didn't miss anything. (participant 6)

> You could check for announcements. Sometimes they may be on that day and they may not, but that kept you up. We did have the weekly… but it was best to check daily than at the end of the week because you could get behind that way… I think that this is one of the most important things about the online class… is to check the announcements because that's how you'll know what's going on. (participant 7)

> It was nice to get the reminder. Even though I tried not to procrastinate too much, but you know when you have a lot of stuff going on, you tend to procrastinate a little bit. So it's nice to get a reminder just to keep myself on track. (participant 8)

> I think it also… it was reminding… kept you on task… Hey, this is due next week, this is due tomorrow. Hey, don't forget to start this. I felt that was helpful, you know, just in case you're missing it. (participant 10)

The other participant was a little more focused on the grammar side of things and saw the reminders less about deadlines and more about the grammar tips.

> Sometimes he would put little reminders of something on there. Maybe a reminder for an exam, a reminder to practice this certain form, like the past tense, present tense. And he would put little things on there as to why to study it and then he would give examples sometimes. (participant 9)

All of the participants mentioned that they thought the number of announcements was appropriate for the class. They all agreed the contributions of the announcements were positive but when asked if more would have been even better, they indicated that at some point there could be too many, particularly if they began to repeat themselves. In fact three of the participants mentioned already "filtering" the announcements if they did not apply to them.

> I just looked for things that pertained to me… I looked at it, I perused it and if it didn't, if it didn't affect me I just ignored it… I think he did a good job of not having them overly redundant. (participant 1)

> I think I just discard the ones that aren't relevant to me… I'll read over them very briefly or just move on if they're not relevant to me, but obviously…I don't think I've ever encountered an announcement that probably couldn't have been beneficial to somebody. (participant 5)

> I'll read it and if it doesn't apply, I'll ignore it. (participant 6)

The consensus opinion on when announcements would become excessive and hence no longer be useful was probably best expressed by participant 8.

> I think if there's a test on Tuesday and you send a reminder the Monday before, maybe if you sent… I think you should only remind them one time. You know, 'cause they are college students and they should have responsibilities. So if you keep doing reminders, like, OK remember today's the test, you know, a little countdown.

4.2.5 Students noticed and appreciated the social presence of instructors

There were some comments about being alone which immediately bring to mind the concept of transaction distance. Participant 4 clearly stated that it could be hard to develop relationships with other students.

> It's difficult to feel close to somebody online because we do not [have] communication in class. They don't know me. They don't have time or they don't care or they work. Not that I have time. I'm just saying…so it's really not easy to feel like you are part of the class unless you take part in those things that don't have anything to do with the assignment.

Participant 3 made it clear that despite all the tools and help, in the end you were on your own unless you went looking for it.

> Obviously, if it's online it's up to you to seek help to make sure you understand it more so than if you were in a regular classroom setting.

However, upon further reflection most of the comments did not really address feelings of isolation or the "psychological distance" spoken of in the literature about transactional distance. Instead the comments focused more on their relationship with the professor. The following comment made by participant 1 was cited in earlier, but it bears

repeating. “It was like he was living with me half the time because he answered his stuff right away.” Others made similar comments regarding communication with the professor through email, announcements or other feedback.

> I think I emailed you fairly frequently, just, you know, mainly on the little points for the grading to make sure I would get every little point, so I thought the communication was pretty good. I always got a rapid response or I think I emailed you a few times about how to say something. (Participant 2)

> I think if I hadn’t had that support I would’ve had to drop the class at some point because I would like fail (inaudible). I wasn’t doing good. I wasn’t doing well, so I would email him that I’m not doing well and he’d say, “You’re okay…” (Participant 4)

> You were probably the most interactive professor that I have had on an online class. I mean just your communication constantly on the blackboard. You posted tips on don’t forget this and don’t get confused about that all the way down to your feedback. Your feedback was very fast and I think that is what is really, really beneficial about taking any class online but especially a language class. (Participant 5)

> Out of each of the semesters I took I probably only had to email the teacher once each one. And it was just because maybe I couldn’t find a partner to talk to or something like that. But just all of the announcements they gave on Blackboard were so helpful that even then I didn’t have to remark them or email him. (Participant 8)

The phenomenon being described by these students is social presence because from their comments they clearly perceived the instructor to be a real person. This fits Tu and McIsaac’s (2002) definition of social presence as “the degree of feeling, perception and reaction to another intellectual entity in a CMC environment” (146). One of the factors related to social presence is immediacy which is the psychological distance between participants that the speaker creates through behavior. Immediacy behaviors

create a closeness and those illustrated in this study included a rapid response to email, regular and relevant announcements, and feedback to posted assignments.

4.3 OTHER EMERGENT THEMES

In addition to the general threads that were observed to be common experiences among the majority of the participants, there were other themes that emerged on a smaller scale. It should be noted that it is not the intent of this study to present these themes as generalizable, however they are noteworthy of discussion.

4.3.1 Students can engage in both active learning and witness learning

Bento and Schuster (2003) developed a taxonomy of participation, that distinguished between "active learners" and "witness learners" based on their degree of interpersonal interaction, high for active learners and low for witness learners. Many of the study participants could be classified as active learners but at the same time they engaged in activities primarily associated with witness learners. Participant #1, for example, engaged in a great deal of one-on-one interaction with her professor through email, yet she avoided interacting with classmates. While she checked what others had posted in the **workbook** and the **hablemos** forums for examples of how to do an assignment, she didn't even look at other forums such as **questions** or **reflections**.

Participants #2, #4, #5, #6 #7 and #9 also looked at or listened to messages left behind by other students frequently. In addition to using them as examples, they, and others, first looked for answers to their questions in the archives of the different discussion forums and the announcements. Participant #6 even used the audio messages to help him identify potential chat partners. Of the seven participants who indicated using archived messages, four regularly participated in chats, which is an activity associated with active learners. This indicates that rather than being types of learners, these

categories more appropriately describe learning behaviors. Students can engage both in active learning, such as chats, and witness learning, such as reading the reflections of others.

4.3.2 There are different student populations with different needs that result in different interaction patterns.

Two participants (#2 and #7) in this study did not have tremendous time constraints on them and as a result took advantage of nearly every possible interaction that was available to them. They read and listened to the messages posted by their peers. They used the supplemental materials despite the fact they received no grades for them. Both of these participants included a desire to improve their ability to communicate in Spanish among their reasons for taking the course. There were others who had similar motivations, particularly those who were heritage language learners looking to make a connection with their heritage culture, but they did not take advantage of the full range of available interactions. The major differentiating factor was that of time. Both of the aforementioned participants had only one course and mentioned that they had the time to focus on this course.

In the middle of the continuum were the majority of participants who were juggling multiple courses, family commitments and work schedules. While they clearly wanted to do well, they found a need to balance that desire with the time available. Participant 5 mentioned that some assignments did not have enough "points" associated with them to overcome her hesitations to participate in them. Others also indicated that they often had to prioritize or choose their interactions based upon how much time they had. The optional activities were the first to get passed over when time became an issue, but some participants (#4, #9 and #10) still took the time for some optional items such as reading the reflections of their classmates.

Whatever the reason, be it overwhelming time and schedule constraints (as in the case of participant #1), the desire for an easy grade (as in the case of participant #4) or a negative experience (as in the case of participant #3), there were also students who, by choice or necessity, attempted to perform the least amount of work possible for the grade they desired. On the surface, this is not a new insight, rather something with which educators have been dealing perhaps throughout the whole history of education itself. It does, however, underscore the fact that minimum standards must be carefully set to include enough interaction to promote the desired level of learning. This diverse population of learners bring distinct perceptions of interaction.

4.3.3 A background in the target language may be important to success in an online environment.

Three of the participants indicated that their previous background with Spanish made the course easier for them. Participant #2 expressed concern for students who did not have any previous experience with Spanish.

> I think I really had a good enough background to get through Spanish I and II online and I did just wonder about some of the other people. I mean what if you had never spoken one word of Spanish before in you life it must be sort of difficult.

When asked if she thought it was easier to take a class online as compared to the classroom participant #8 cited her experience as a benefit.

> I think that it was a little harder but because I already had some experience with things, it was fine. Like it wasn't too difficult.

Participant #10 expressed that being around her family members who spoke Spanish everyday may have helped make up for the more limited amount of language she was exposed to in the web-based course.

> I really didn't find any difficulty with it being online. That wasn't any more difficult. Other than not hearing someone speak native Spanish everyday, but that

> wasn't an issue for me because I still heard it. And so I definitely don't think that students who don't have a lot of Spanish experience should do online.

In addition to these three, who expressed concern for students without any previous experience with Spanish or daily exposure outside of class, all seven of the other participants also had previous experience with the language. One may speculate as to the extent to which prior experience with the language was a contributing factor to the students' successful completion of the course and whether the lack of such experience or other factors may have contributed to failure to complete the course. The study cannot provide insights related to this issue because of the lack of participants who did not complete the course. While they were included as recipients of the email invitation to participate in the study, none ever responded.

4.3.4 The online environment may encourage more interaction from students who don't like being "put on the stage" in a face-to-face classroom.

The first participant, despite doing just the bare minimum to secure the credit she needed for her advanced degree, was very positive about her experience in the class and its potential to reach others as well. When asked at the end of the interview if there was anything else she wanted to say about the course, she shared an experience from her face-to-face, first semester Spanish course. One of her friends was embarrassed by harsh criticism in front of the rest of the class.

> My one friend in Spanish 1 was so overwhelmed with that professor, and she's fluent in Spanish, and she was so overwhelmed with that professor that she didn't want to take Spanish 2, and so she dropped out of college. So I was like take Spanish 2 online it's way easier. So I think, now that I've told her about it and shared some of the work with her and kind of showed her what I was doing, she's more relaxed and I think she is going to take it this semester coming up. So, I hope so, because she was willing to throw her whole degree away because of that one Spanish 1 horror story…

She continued to state that,

> This is a good class for those who don't necessarily want to be part of a team, be part of… be stuffed in a room with a bunch of people. I mean, I just, 'cause there were a lot of kids in Spanish 1 that just dropped because they didn't want to be into these groups… I think it's just less stressful, and less intimidating for some, you know. The professors in classrooms, they go around, asking questions in Spanish and like… (gasp) terror because everybody's watching you and that, and even though they don't know what you're saying the professor does. And then if you know it's a professor that's potentially going to make fun of you or call you a name, well in that case, you're not wanting to speak ever again. In that particular case then online is the way to go.

When asked what else she wanted to say about the course, participant #7 also expressed the idea that the participation was on much more of an individual level.

> A lot of people don't feel comfortable talking in person, or I've noticed in some of the classes I've been in, regular classes, a lot of people just sit. But an online class you have to, you're almost forced to, so there's much more participation in the online class than an in-class class. Because in in-class class you have a certain number of students who seem to raise their hands all the time… But in an online class, everyone has to participate.

On a similar note participant #9 final comments expressed that it was much easier to ask for help in the web-based environment.

> There are students who even go into the textbook, seeing the teacher, talking to the teacher and they just don't get it. And like the tutorials on the website help a lot more than just sitting there and going through it and listening to everybody else around you. Sometimes you don't want to say "I don't get it." And so they don't say anything, and then it's too late. They don't have that reinforcement… Because if there are people who are more advanced than you are, and you're saying "I don't get this," then they're starting to say "It's like this," and the professor's already explained it as many times as they know how, so a student feels "Let me try to do it," and everybody else starts talking and sometimes you don't want that attention… [Online] You can just email and say, "I didn't understand that, can you try to explain why you conjugate it this way or why you say it this way or why you don't say it that way."

These three different participants volunteered this information as what they wanted to add to the study. There were no direct questions addressing the idea of the online environment being more friendly, but it was clearly on the mind of these individuals.

4.3.5 The online course more thoroughly used the course materials.

One of the benefits of an online course is that the class is not restricted by the fixed time schedule required to share physical classrooms on a campus. Even under the best circumstances, if students ask more questions or request more detailed explanations the time required to address those issues cannot be retrieved. Even if students agreed to do so, a class cannot be extended as that would interfere with the next class scheduled in that room. Three participants noted that there was more "work" in the online course or that the course actually took advantage of more learning tools than the face-to-face classes with which they had experience.

Participant #7 said that more work resulted in more learning and the nature of an online course made her work harder.

> You did learn, because I think online classes you do a lot more work than in class, a lot more work. So you… I feel you learn… you may learn… I know in-class you learn, but online you are forced to really buckle down, especially a foreign language class.

Participant #8 compared her experience in a face-to-face Spanish 3 course. She appreciated the variety in the online course and how it offered more kinds of activities.

> In some aspects it's sometimes better than the class because in Spanish III we didn't even watch like the videos. We didn't do the culturas every module or for every lesson and so I think it was almost…I liked it better than the classroom. Although, in the classroom you get more exposure to Spanish, but I liked it better just because it was more…I think it was more intact but in the class you talk a lot and you do these little exercises but it seems like more busy work just because you're writing or I don't know.

Participant #9 wished that she had taken Spanish 1 in the online format as well. She explained that it was much more balanced between all the different activities.

> You have a lot more, you get a lot more out of it than you do in the classroom. In the classroom it's just strictly the textbook… from my experience, the Spanish 1 that I had was strictly the textbook. We didn't really conjugate verbs, we didn't really go over the cultura at all. So I guess maybe that's a reason why it wasn't really important to me also. Just the only time we really tested ourselves was on

> the exam. Like the little prácticas, we didn't really have that. It was more just speaking. It wasn't seeing how it was written, it wasn't… it wasn't really anything else. It was just strictly the textbook.

4.3.6 Some students were uncomfortable with their speaking skills.

Not all the data indicates that this online course was as successful as might be implied so far. In addition to those participants who thought that previous experience with the language would be necessary to be successful in this course, there were some who felt that their speaking skills were not at the level they should have been at the end of the course. Participant #5 indicated that she thought there was somewhat of a skills trade off when it came to comparing the online course to a face-to-face course. While she was confident with her reading and writing skills, she was less sure of her ability to communicate orally.

> I did miss the concept of communicating enough to where… I don't really feel comfortable… not comfortable because I really don't mind, I don't care if someone laughs or, you know, I make a mistake but I don't feel confident enough about my own skills communicating.

Participant #10 also expressed some doubts about her speaking ability, but was unsure if it was specifically related to the online course.

> I don't know if I feel like I practiced the speech enough. And so I felt like I would come out more comfortable about speaking Spanish, and I still didn't, but I don't know if that's a learning process or if it's a problem with the web-based course.

Both participants reported being a little nervous at the prospect of going on to Spanish 3. Part of it came from their doubts about their speaking ability and some of it from just not knowing what to expect.

4.4 SUMMARY

These common threads and themes that emerged from the data will be applied to the research questions in the following chapter. To review, the common threads include 1) the value of programmed feedback that explains mistakes, 2) the use of message

boards for getting help from other students, 3) the potential value and inherent difficulty of **chats**, 4) the value of announcements and 5) the value of the instructor's social presence. The themes were: 1) students can engage in both active learning and witness learning; 2) there are different student populations with different needs that result in different interaction patterns; 3) a background in the target language may be important to success in an online environment; 4) the online environment may encourage more interaction from students who don't like being "put on the stage" in a face-to-face classroom; 5) the online course more thoroughly used the course materials; and 6) some students were uncomfortable with their speaking skills. The questions to which the above information will be applied are as follows:

1 What is the effectiveness of the available interactions in a web-based Spanish course as perceived by community college foreign language learners?

2 How do the different interactions work together to facilitate learning in an online foreign language learning environment based upon their purpose?

3 How do the different interactions work together to facilitate learning in an online foreign language learning environment based upon with whom or what the student is interacting?

Chapter 5: Discussion, Conclusions and Recommendations

5.1 RESEARCH QUESTIONS

Before returning to the questions, it is appropriate to return to the definition of interaction. The literature review of Foreign Language Learning, Second Language Acquisition, Computer-assisted Language Learning and Distance Learning have provided varied explanations of interaction, its role in the learning process, its purposes and its components. For the purpose of this study the term interaction has been used to refer to the available assignments and communication features in the course infrastructure. It should be noted however, that the author's view of how students perceive interaction has evolved to include the idea that these participants viewed content as an extension of the person who created it.

5.1.1 What is the effectiveness of the available interactions in a web-based Spanish course as perceived by community college foreign language learners?

- Which of these online interactions do students perceive as most beneficial to learning a foreign language and which ones do they perceive as least effective? Why?

It was clear from the interviews that the feedback and announcements were the ones they perceived as most beneficial, and it needed to be more than just simple, "this is correct and this is not." They consistently indicated that quick feedback was vital to their learning and many compared it to talking to the professor in the classroom. It was called reinforcement by several participants and others spoke about going back to that feedback and studying it as reference material before going to take their exams. The announcements were also seen as a great benefit from a support standpoint. While they were more general, they helped these participants feel like they were on the proper course.

Of all the different assignments, the participants most often expressed doubts as to how the **cultura** assignments fit with the objectives of the course. In these assignments the students researched assigned countries on the Internet using instructor provided websites as a starting point; they were also permitted to explore sites they found on their own. The following examples are some typical comments about those assignments.

> They were just interesting, I think. That was pretty much it. I don't think it had anything to do with, you know, because it's in English and we didn't have to do anything much in Spanish. (participant 3)

> In all honesty I don't really think they did [contribute to learning]. I think they were on our exam, but we pretty much just had to write a little something about it. For me it didn't really… I did like the fact that I could see different parts of the country by going online, and so I did like that. I just don't think it really helped as much. (participant 9)

It would appear, that the learners here did not see the connection between learning a language and learning about the culture around that language. So while the cultural materials were linked to the textbook and tested, it was never explained how learning about those things, which they both acknowledged were fun and/or interesting, really fit into the big picture of learning Spanish.

In addition to the **cultura** assignments, the **chat** also came up as something that did not contribute to the learning of several students. It was not that the learners did not see or understand the value in those assignments, but the level of frustration accompanying them was just too high and the grade impact too low in order to justify spending the time necessary to complete them. Those who were successful tended to have matched up with someone reliable and near their own level with whom they were comfortable.

- To what extent do the students participate in the interactions linked to their grades?

Point values did play some role in what interactions these students participated. While no one seemed to do a cost-analysis to determine which assignments to do, the **chats** were a good example of something that was often just not worth the effort for only five points. Some of these participants mentioned doing particular assignments, such as the **cultura**, just to get the points. Others observed that in some cases their fellow students were doing the minimum amount of work to get the points. For the most part, these students participated in the interactions that were directly linked to their grades. Since there were no study participants from among those students who did not successfully finish the course, this question cannot be definitively answered. There are some indications that time likely plays as big a role in deciding in which interactions to participate (see participant 1).

- To what extent do the students participate in optional interactions not related to their grades?

Many of the optional assignments were either ignored, participated in only passively by reading what others had done, or found participation tailing off as the semester wore on. However, of the optional assignments, the crossword puzzles were most often the ones that were done, and there were some students who had the time and did them all. There was no clear answer to this question either, but time appeared to be the most important factor in those decisions. Participants 1 and 10 indicated that time was a primary factor in taking the course in this format and in making decisions about what elements could be skipped. Participant 7, on the other hand, indicated that since this was

her last class before graduation she had more time to dedicate to this class than she would have had in previous semesters and as a result she said, "I took advantage of everything on that Blackboard, everything."

5.1.2 How do the different interactions work together to facilitate learning in an online foreign language learning environment based upon their purpose?

- What do community college students perceive is the role of the interactions suggested by FLL research (about the language, about the message and about the tasks) in online foreign language learning?

The participants in this study discussed in great length the benefits of interactions about the language such as grammar tips in the announcements and practice available through the **práctica** assignments. They reported that these interactions were a source of reinforcement and feedback for them and that the role of these interactions was to explain their mistakes. "That explanation was important because it gives you a better understanding" (participant 7).

They also perceived as valuable, interactions about the tasks such as looking at what others had done on **hablemos** exercises to determine what length their responses should be, and looking for examples in the **workbook posting** messages to help clear up instructions they didn't completely understand.

There was little indication that they viewed any of their interactions as being about the message. From the researcher's perspective, it is possible that this offers insight into why some of the participants didn't see a connection between the **cultura** assignments and the course objectives. Since these were actually done in English, they were entirely about the message and had nothing to do with the language or the task. This could lead one to wonder if those same students perceive the process of language learning as merely acquiring structures, lexicons and predictive rules.

- What do community college students perceive is the role of the interactions suggested by SLA research (a source of input, a way to test internalized language rules and a method of integration into a community) in online foreign language learning?

It was clear that many of these participants saw reading and listening activities as an example of correct Spanish, but that perhaps is better addressed in the next question about authentic material. There was one case, however, that did yield some insight into how a source of input might contribute to the learning process. Participant 5 would listen to other students' **hablemos** messages and analyze them.

> It was interesting to listen to them because I think I'm a huge critic of myself so I sat back and "How would I have said that?" and I would, nine times out of ten, would have never said it like they said it. So I try to find little ways around things when I don't know how to say them. Use a different word. Use a different verb. Use a different tense, you know, something different to try to make the sentence work.

While a definitive conclusion cannot be drawn from the reflections of one participant, this may in fact provide a glimpse inside "the black box" that interaction is often described as in the debate surrounding SLA theory.

This same participant, while not completing many **chat** exercises, suggested that it should be a chance for those involved to help each other with some feedback on mistakes they make. It is possible to infer that since she was expecting feedback that she may have likewise viewed this opportunity as a place to test the language rules she thought she had learned. However, the anxiety and frustration often experienced with the **chat** could just as easily take away from that scenario. Testing hypothesized language rules just seems a little too analytical to really describe what was going on.

- What do community college students perceive is the role of the interactions suggested by DL (access to authentic material, opportunity for communication

and/or collaboration and access to feedback and support) in online foreign language learning?

There was a good amount of information gathered that addressed student perceptions of these interactions. Access to authentic material such as in reading and listening (including both **escuchemos** and **video**) was generally regarded as an example for either the purpose of imitation or for awareness of differences in regional accents and dialects. Access to feedback, as discussed somewhat when addressing interactions about the language, was viewed as reinforcement or explanation.

Support seemed to have two purposes as well. First, as discussed earlier with interactions about tasks, these gave students the opportunity to quickly verify if they were following instructions and doing what the professor expected of them. The other purpose was for the emotional support of venting as mentioned by participant 9 or having "a hurt shoulder to lean" on as explained by participant 10. These interactions really seemed to have the effect of reducing transactional distance as they made these participants realize they were not alone.

One of the more disappointing results of this study was an apparent lack of motivation for students to collaborate. While it should be noted that there were not a lot opportunities for real collaboration (**chat** mostly) designed into this particular course, there was some expectation or hope at least that students would take advantage of those opportunities as a way of making connections with other students, for the most part they did not. The total number of students who participated regularly in **chat** assignments among study participants as well as non-participants was very low even among those who successfully completed the course. As an example, in a section of this course subsequent to those in which the study participants were enrolled, of the 13 students who completed the course (down from a starting number of 22) only six routinely accomplished the **chat**

assignments. What is clear from this study is that whatever natural inclination students may have to collaborate in this fashion (and there are those who prefer not to as illustrated by participant 1), it is not enough to overcome the inconvenience and frustration associated with it.

- What do community college students perceive is the role of the different modes of interactions along the continuum from one-way direct instruction to two-way synchronous channels as suggested in CALL and DL in online foreign language learning?

Interestingly enough, the **tutorials** which were one-way direct instruction were perceived as one of the strengths of this course. From some comments, a students ability to access it when and if needed was one of the features that made it valuable. The announcements were also one-way in nature but played the important role of keeping students focused and on track. On the opposite side the **chat** was almost viewed as an extra that was great if you could find someone reliable with whom to work, but not so valuable as to make students put huge efforts into completing them. With as much emphasis as is placed on moving away from direct instruction, this study seems to indicate that there may still be a limited place for it when it is combined with other interactions along the aforementioned continuum.

In between those extremes of one-way direct instruction and two-way synchronous communication were the examples of the asynchronous message boards, where students connected with others and found both technical, task and emotional support and the automatic feedback from the **práctica** assignments. In many ways, the automatic feedback was viewed as similar to a synchronous interaction like "talking or submitting your answers in a classroom with a professor" (participant 9). However, when participants analyzed what it was about that feedback that really made it valuable to their

learning, it was clearly the content that made the difference. While the immediate feedback was definitely helpful, if it had not been explanatory in nature, then there would not have been the same benefit. So the indication here is that the mode of interaction was less important than the content of feedback.

5.1.3 How do the different interactions work together to facilitate learning in an online foreign language learning environment based upon with whom or what the student is interacting?

- What do community college students perceive is the role of the interactions suggested by FLL research (teacher-class, teacher-group, teacher-student and student-student) in online foreign language learning?
- What do community college students perceive is the role of the interactions as suggested by DL (learner-learner, learner-instructor, learner-content and learner-interface) in online foreign language learning?

These two questions can be addressed together as teacher-class and teacher-student interactions can be considered as just different kinds of learner-instructor interactions. They were available through the **announcements** feature (teacher-class) and in email communication with the professor as well as the **práctica** and **workbook postings** assignments (teacher-student). As discussed previously the **announcements** provided support predominantly in the form of reminders and tips. Email was generally used for support issues when student-student or learner-learner interactions (such as the **questions** forum) failed to resolve it. The feedback was seen in more of an instructional role. If these interactions are distinguished by immediacy behaviors, a valuable social presence is created that these participants viewed as critical to their success.

The student-student interactions are essentially the same as learner-learner interactions and was centered predominantly around the discussion boards where students could view what others left behind either for answering questions about technical issues

or assignment tasks. They were also used for emotional support. In many cases these were interactions where one student had left a message that was later read by another without the student who originally message ever knowing how the other used or benefited from it. There were cases, particularly in the **questions** forum, where there were responses to questions, but there were others who benefited from merely observing. It was less clear what the value of a social presence was with these interactions. Many of these participants only sought out this kind of interaction when they had a question, using it as one might use a list of frequently asked questions, as a source of information rather than an actual interaction between to real people.

In the **chats** the comparative ability level of the participants appeared to play a role in developing social presence. Participant 9, in particular, expressed some discomfort working with someone with a significantly lower speaking ability.

> I, they're lower, it's not… I don't want to say annoying, but it just goes a lot slower, because they're trying to form the correct… and then they'll say "no, wait, wait that's not right; let me start all over." And so you're like [sigh] OK.

From her comment it would appear that slow responses and repetition may be behaviors that create more distance between the participants and diminish social presence.

That brings up the learner-content interactions. The content created in the forums is perhaps perceived by students as more of an interaction with the person who left the message or assignment than with the content itself. Even the **tutorials** were at times compared to listening to the instructor in the class. So while instructors and researchers may discuss this as a category of interaction, it is unclear that students perceive this as a separate kind of interaction.

- What do community college students perceive is the role of the interactions suggested by SLA research (non-native speaker with native speaker and non-native speaker with non-native speaker) in online foreign language learning?

The only distinction that any of the study participants made between native and non-native speakers in terms of the role of interacting with them was that native-speakers provided an example of how the language should be spoken. Due to the different levels of heritage speakers both inside the bounds of the class, and those they may come in contact with outside of the classroom, this can be slightly problematic from the standpoint of the academic study of language. Many heritage speakers especially those who would fall in the category of HLL-4, speak a very colloquial, "non-academic" form of the language. While from a communicative standpoint interactions with native-speakers are generally valuable, the issue may be who a student considers to be a native speaker. These participants did not distinguish between their non-native speaker instructors, true native speakers such as were illustrated in the **video** assignments and some of their heritage speaker peers.

5.2 PERCEIVED ATTRIBUTES OF EFFECTIVE INTERACTION

Based on the interviews with the ten participants, the common attributes of the most effective interactions were that 1) the learners perceived a connection to their learning goals, 2) the interactions were timely, and 3) there was low ratio of frustration during the interaction as compared to the potential reward. In this section, these attributes will be compared to those discussed in the literature about Foreign Language Learning, Second Language Acquisition, Computer-Assisted Language Learning and Distance Learning.

5.2.1 Connection to individual learning goals

While it is obvious that interactions should be closely tied to learning objectives, the question is whose learning goals. Students have a range of learning objectives that may not always align with those of the instructor or course designer. Table 5.1 lists the motivations of the various participants for taking this Spanish course. While the course was designed around learning objectives in the four skill areas (reading, writing, listening and speaking) as well as cultural knowledge, the study participants did not express their motivation from that same standpoint. For nine of ten, at least part of their goal was the fulfillment of a requirement. Participant 2 was probably the most in tune with the learning objectives of the course because her goals were specifically to become more proficient in the language. Among the others, however, the cases ranged from just wanting to do just enough for credit to wanting to communicate with family members, co-workers or clients.

Participant	why Spanish
1	fulfill degree requirement
2	brush up “rusty” skills
3	requirement for transfer to four-year college
4	fulfill financial aide requirement, get A
5	part of degree emphasis
6	fulfill degree requirement and improve fluency
7	fulfill degree requirement, communicate at work
8	degree requirement, get A, remember for long time
9	degree requirement and improve fluency
10	degree requirement and professional need

Table 5.1: participant motivation for taking Spanish

Their were several purposes behind the interactions that the study participants perceived as effective in moving them towards their learning goals: 1) explaining their mistakes, 2) reading or hearing examples of grammatically or phonetically correct language, 3) practice communicating, and 4) help understanding grammar points, the assignments or the course infrastructure.

According to FLL the purposes of interactions are to relay information (a message) in the target language, to relay information about the language (such as grammar rules) or to relay information about the task (instructions). Explaining mistakes would fall under the category of an interaction about the language. Practice communicating would be an interaction about the message. Help with questions on assignments or the course infrastructure would be an interaction about the task. Reading or hearing examples of "proper Spanish" does not clearly fall into one of the categories. They could be considered as either interactions about the language or about the message, but the majority of the study participants who mentioned this seemed to consider it more about the language. Their focus was not so much on what was the message as it was about what was the correct way to say or write it. That said, it doesn't fit as cleanly into this category as do explanations about their mistakes.

SLA describes interaction purposes as input (an example of proper language), hypothesis testing (of language principles), and community integration. While one of the purposes identified by the study participants did not easily fit the purposes described in FLL research, examples of grammatically and phonetically correct language easily fits the SLA model of input. The purpose of explaining mistakes could be viewed as hypothesis testing, however the SLA literature viewed this as more of a negotiation where the learner looked for verbal and non-verbal cues to determine whether what they said was correct, rather than receiving an explanation about why what they said was not

right. Practice communicating at first might be seen as a kind of community integration but many of these communication opportunities were messages left behind in an audio message board and did little to help students develop a sense of being part of a language community. The one area where this was more likely to happen was with the **chats** that, unfortunately, were underused. A few participants indicated that doing their **chats** with the same person every time did lead to an online friendship, but there was not enough data to support a conclusion that they created learning communities among participants.

The purpose of interaction in both CALL and DL research is to provide access to authentic materials, opportunities for communication and collaboration and access to feedback and support. While the purpose of explaining mistakes does fit the category of access to feedback and support, it should be noted that the term feedback may be too general to express what the study participants clearly identified as what was beneficial about the feedback. Access to examples of correct language use also easily fits into the category of access to authentic materials. Practice communicating likewise corresponds to the purpose of providing opportunities for communication and collaboration. Finally, help understanding the assignments and course infrastructure also falls into the category of access to support. The CALL and DL purposes are perhaps the model that is the best overall match, however they are so general, that they have limited explanatory power when applied to language learning.

The attribute of making a connection to individual learning goals is supported in the literature on task-based interactions. It is possible that learners more easily see the relevance of activities and tasks to their individual learning goals. The purposes discussed above (explaining mistakes, reading or hearing examples of grammatically or phonetically correct language, practicing communication, and helping to understand grammar points, assignments or the course infrastructure) have a direct impact on the

completion of tasks such as meeting degree requirements, improving language proficiency or being able to communicate with Spanish speakers in the community.

As part of Activity Theory, one of the social views in SLA is that needs are identified, and from them are created objectives that motivate the learner. In order to address those needs and objectives, learners engage in certain actions within the context specific conditions, and the resulting operation is correct language behavior (Block, 2003). Lantolf and Pavlenko (2001) stressed that, in Activity Theory, individual goals and motives affect the interactions in which learners choose to engage. These elements of Activity Theory are supported by the study participants' desire for interactions that support their learning goals.

Ellis (1984) indicated that some interactions focused on completing a specific task and referred to them as activity-oriented. In those kinds of interaction, language is viewed as a means of achieving a goal. The nature of activity-oriented interactions enables them to easily make connections to learning goals. In a study that regarded language as the means to accomplishing a goal, Prabhu (1987) had some success in the task-based language teaching of the Bangalore project. The results supported the hypothesis that a focus on meaning rather than mechanics would result in better learning. Examples of learning goals from the study participants' that focus on meaning include improving language proficiency and being able to communicate with those who already speak the language.

Another good example of task-based learning meeting individual learning goals can be found in Gonçalves' (2004) ICALL system for instruction in academic English. It provided international students with task-based learning modules to improve their individual language deficiencies. The ICALL system identified those needs in order to prepare them for an English assessment important to the students' goal of enrolling at the

university. The evaluation of this system is not complete, however, it shows promise in preparing students for the assessment that the university requires. The connection between the interactions in the task-based modules and the students' goal of attending this university is similar to what the study participants identified as an attribute of effective interaction.

5.2.2 Timeliness

The next attribute was that of timeliness, and there were three areas in which it was identified as particularly beneficial to the study participants: 1) automatic feedback, 2) archived information and 3) email correspondence. The automatic feedback is provided by the Blackboard assessments once the students have submitted their answers. The explanations of their mistakes were immediately available, and they indicated that this instant feedback was particularly helpful because what they had done was still fresh in their mind. The second area included the announcements and the message boards such as the **questions** forum where they could look for answers to their questions. This was not an issue of response time, rather it was the fact that previous announcements, questions and answers were archived and available immediately. The last area included responses to email correspondence. There was no data in the interviews about how quick an instructor response needed to be in order to be beneficial, but they all indicated that their instructors did respond in a timely fashion. The department guidelines for teaching this course state that instructors should respond within 24-48 hours as suggested by Roblyer and Weincke (2003), and the instructors reported that they followed those guidelines.

This concept is absent from the literature reviewed in this study. FLL and SLA research do not address issues of timeliness because they assume face-to-face interaction either in the confines of a classroom or through participation in some kind of social

setting. Aside from Roblyer and Weincke (2003), CALL and DL research for the most part does not address response times. The focus on time issues in these fields has primarily been on the role of asynchronous and synchronous mediums. Kay (2006) reported two studies (see Son, 2002; Yacci, 2000) that mentioned response time, and those just commented that the delays inherent in online communication might cause problems. Kay's study reported that "there appears to be a window of opportunity, roughly 19 hours, in which students will follow up on a discussion board message, after which they start to lose interest" (774). While the results of this study do not attempt to quantify an ideal response time, it does support the idea that response time is an important factor for online interactions.

5.2.3 Low frustration to reward ratio

The third attribute of quality interaction was a low frustration to reward ratio associated with the interactions. The contributing factors this ratio included: 1) the level of the reading and listening materials, 2) the proficiency level and reliability of their partner in paired activities, 3) relevance to the exams and 4) the point value of the assignment.

According to the study participants, the level of reading listening materials was "about right" in that they understood most of the passage after two or three times through it. They said that usually there were still a few specific words they did not understand but they got the gist of the message and were able to answer the accompanying questions. The one participant who was classified as a type-4 Heritage Language Learner clearly found them easy but thought the level on them was about right. Presumably she meant that the level was appropriate for the course, not necessarily for her.

Two aspects of working with another student affected the amount of frustration that study participants experienced: their partner's proficiency and reliability. The

proficiency level of a partner really came into play in the **chat** assignments. Some study participants reported that working with partners well below their level was frustrating as it made the assignment more time consuming and tedious. One was so intimidated by what she perceived as native speaker proficiency in an early chat partner, that she did not attempt other **chat** assignments. It was clearly the consensus opinion that chatting with someone of similar ability was both more comfortable and better for their learning process because it was closer to being a natural conversation. For partners' proficiency to even be an issue, they had to actually participate in the arranged chats. Many study participants said the most frustrating thing was trying to find a partner who would actually meet them in the chat room at the agreed upon time. The study participants who tried to participate in **chats** agreed, that the most frustrating part of the class was when someone who had agreed to do a chat with them failed to get online at the appropriate time. That frustration could be mitigated if by giving some kind of notice if they were unable to be there, but few appeared to do that. Instead, study participants reported waiting for anywhere between 20 minutes and an hour for a partner who never showed up.

Both the level of test and listening passage and the proficiency and reliability of their partner are causes for frustration; the two that follow focus on the perceived value of the interaction. The first of those was the how relevant the interaction was to the exams. The study participants perceived interactions like the **práctica** and **tutorials** to be very good preparation for the exam. More than one participant mentioned studying printed tutorials in the car before going in to take an exam.

The point value associated with the interaction also added value to them. While having a grade or points assigned to an activity was not a guarantee that the students would engage in that interaction, those without points had the lowest completion rates.

Reflections and **pruebas de práctica** were the first ones bypassed when the study participants had to make choices about what they had time to complete.

The literature on FLL and SLA does not widely comment on the topic of frustration. When it is, it is usually addressed in the context of Foreign Language Anxiety. Likewise with CALL and DL the focus has often been frustration with the interface. The study participants have a different view of frustration that includes of the level of the language input they are receiving and behaviors of other students (and potentially instructors, although that was not the case in this study).

Finally, the last attribute was that of support either with information about the language, the assignments or the course infrastructure. This support feature is indeed present in the literature in all four fields. In FLL, Ellis (1984) indicated three goals for classroom interaction: those about the language, those about the message content and those about the tasks. Interactions about the language and about the tasks are part of the above described support. In SLA research this support can take the form of a negotiation for meaning in which the learner can test hypothetical grammar rules as well as move towards fuller community integration. CALL research specifically identifies two of four design purposes as "tutorial" and "utility" (Pusack, 1987) which both apply to what these study participants identified as support with the language, the assignments and the course infrastructure. Among the purposes for interaction according to DL research were monitoring and supporting learning which would also fall under the category here of support.

Since the participants indicated they were able to understand most of the listening and reading passages, this study supports Krashen's (1984) theory that language input conducive to learning takes place at a level just above the learner's current level (denoted as i +1) as well as Vygotsky's theory of a Zone of Proximal Development (Rieber &

Carton, 1987). Some of the study participants reported difficulty chatting with individuals they perceived to be native speakers suggesting that *foreigner talk*, described by Hall and Verplaetse (2000), did not always occur. The native and heritage speakers were not perceived as altering their speech patterns in order to facilitate communication. On the topic of partner reliability, Weasenforth, Biesenbach-Lucas and Meloni (2002) reported that students became frustrated with classmates who did not keep up with weekly discussions. The study participants experienced similar feelings when their classmates failed to show up in the chat room at previously arranged times. The factors that counteracted frustration, the interaction being perceived as relevant to the exam and high point values, were noticeably absent in the literature reviewed for this study. Weasenforth, Biesenbach-Lucas and Meloni (2002) mention raising point values of assignments in an effort to encourage greater participation, but did not include the results of their course modification.

5.2.4 How is this different from interaction in other online courses?

It could well be asked if these attributes are any different from those of effective interactions in non-language online courses. One would indeed have to include that except for a few items that would be unique to the study foreign languages, such as the need for examples of authentic language models and opportunities to practice speaking, the attributes of effective interaction discussed here have application across the spectrum of online courses.

5.3 DIRECTIONS FOR FUTURE RESEARCH

One of the values of grounded theory research is that it can indicate new areas for further exploration and this study is no exception. In fact, the results perhaps pose more questions than they answered. The following topics were not threads common to all the

participants but may be worth pursuing at greater length, perhaps with other methods, in order to learn more about them.

5.3.1 What is the role of previous language experience in success in this or other web-based foreign language environments?

As indicated in table 5.2, all ten participants indicated some previous experience with Spanish. As noted earlier, several participants suggested that having a background in the language or contact with native speakers was probably important to success.

Participant	past experience
1	Heritage Learner (HLL-4)
2	high school/college and travels
3	middle & high school
4	Heritage Learner (HLL-3)
5	middle & high school, native speakers at work
6	Heritage Learner (HLL-4)
7	high school, native speakers at work
8	high school, friends
9	Heritage Learner (HLL-4)
10	high school, friends, family and co-workers

Table 5.2: participant previous language experience

Participant #10 was probably the most vocal about the need for that preparation.

> I had done well in previous Spanish classes. I know that there are other people who didn't do well in previous Spanish class and still would do a distance learning. To me that is not right for them on a simple level of understanding and being able to handle Spanish… I think it's just more than making the grade. Like just because someone made a B in Spanish 1 does not mean they are ready for an online Spanish course. They really needed to have a clear comprehension because I know there were some in my Spanish I class that had pretty good grades and they were not ready for something like that by any means.

When asked to speculate about how someone without any previous experience would do in an online Spanish 1 and what kind of preparation, if any, would be necessary to take it, she said the following.

> I think it would be very troubling, but I think I would say they would have to have previous high school Spanish experience or have some, maybe a test, you know, like a assessment showing skill in reading and everything because if they are not able to read and understand it and have some grasp of what's going on I don't think it would be beneficial to them, because a lot of people go into Spanish I knowing nothing.

One area on which this study is conspicuously silent is that of what happened to the unsuccessful students. Of the four sections from which participants were solicited, only 49 of 96 students completed the course. In future studies it may be useful to include a survey of previous experience that may then be compared to a record of those successfully completing the course. Another possibility would be to collect exit surveys from those withdrawing from the course, although these are often difficult to obtain.

5.3.2 What role does the heritage language learner's connection with or desire to reconnect to the heritage culture, actually play in their learning experience? And does that desire to connect to a target culture play a similar role in the learning experience of a non-heritage speaker?

As indicated earlier the study participants had many different motivations for taking Spanish. Two of the four participants who were heritage learners stated that improved fluency was one of the reasons for taking Spanish. The other two identified that meeting a degree or financial aide requirement was an important motivational factor. In fact, nine of the ten participants indicated that meeting a degree requirement was at least part of their motivation for taking Spanish. The question of whether or not a heritage speaker would take their heritage language if it was not a requirement of their degree was not addressed in this study. Neither did this study explore the similarities in motivation that some non-heritage learners shared with the heritage learners as it appears that some

of them at least are trying to integrate themselves into the target culture either for professional or family needs.

Lee (2006) did a case study of two siblings in which electronic communications contributed to the development and maintenance of their heritage language, but the language learning here was more of a result of the siblings desire to maintain a weblog. Future research may include ethnographic studies about the participants' relationships with members of the heritage community. Additionally, in depth interviews about their perceived status and language ability compared to others in the community may also shed light on whether these social issues are motivation factors that can be taken advantage of in a learning environment.

5.3.3 Can the anticipation of transactional distance mitigate its effects?

One of the more interesting comments found in the interview with participant 4 was included in the following exchange:

> *Participant 4:* It's difficult to feel close to somebody online because we do not [have] communication in class. They don't know me. They don't have time or they don't care or they work. Not that I have time. I'm just saying…so it's really not easy to feel like you are part of the class unless you take part in those things that don't have anything to do with the assignment. Really. That's what I think.
>
> *Interviewer:* Do you think that made it more difficult to learn in that kind of environment?
>
> *Participant 4:* No, because I knew I was going to be alone when I was doing it.
>
> *Interviewer:* So you were kind of prepared for it ahead of time?
>
> *Participant 4:* Yes.

This phenomenon does not seem to be addressed in the literature surrounding transactional distance (the psychological separation perceived by learners resulting from the physical separation inherent in distance learning). The focus of that area has

traditionally been on the role of interaction as a way of mitigating its effects, but this participant is indicating that because she expected to be alone, it did not affect her learning. While no conclusions can be drawn from the comments of one participant, the comments of this student suggest that if individuals who enroll in distance courses have expectations of being on their own they might be better prepared to succeed.

Future research could investigate what kind of expectations students have coming into a distance course. An instrument that measures transactional distance such as used by Chen (2001a, 2001b) could be administered at different times during the course to see if there is a correlation between student expectations and the effects of transactional distance. It could be administered to multiple distance courses at multiple institutions, providing a sample size large enough to produce generalizable results.

5.3.4 Is there a correlation between how often a student checks for course announcements and increased participation in other areas of the course?

In one way or another, the participants of this study indicated that frequent checking for announcements helped them keep on track or not miss things. These individuals also could be described as participating to a great extent in the other areas of the course (with the possible exception of the first participant who was striving to pass with the minimum amount of effort necessary). In future studies, it would be interesting to learn if checking the announcements is what led to those higher levels of participation or if there is some other contributing factor that simultaneously encouraged both. Such information would be useful in helping students decide if web-based foreign language learning is appropriate for them or help them incorporate the necessary success skills in order to complete the course. Future studies could analyze the number and duration of student logins through tracking mechanisms available in Blackboard. A login for just a couple of minutes, for example, is likely to represent a student just checking

announcements. A self-reporting survey of the number of times students just checked for announcements could also be compared to participation in other areas of the course.

5.3.5 How can negative interactions be minimized or replaced with positive experiences?

Participant 3 indicated that for her, the chat assignment was a negative experience because the other person was more advanced in speaking ability. While she was the only one who reported a bad experience with it for this reason, most of the study participants preferred to work with someone closer to their own abilities. This result could be explored further by conducting future studies in which students in a course are randomly assigned to one of two treatment conditions. One condition would involve assigning each student to partner with another student of similar language ability, as determined through an oral assessment with the instructor. The second condition would involve randomly assigning students to a partner. Such a studies may be helpful in determining the extent to which partnering students with more similar levels of language knowledge and skill results in more positive perceptions and increased participation of students in online chats.

5.3.6 What immediacy behaviors exist for online learning?

Immediacy behaviors increase the closeness that communication partners perceive between themselves (Mehrabian, 1969). Gunawardena (1995) indicated that CMC users develop ways of expressing nonverbal immediacy behaviors in those environments such as emoticons. This study also identified several behaviors that create a social presence by closing the distance between the instructors and the study participants. Announcements, quality feedback received in a timely fashion, and a quick response to learner initiated interactions were immediacy behaviors exhibited by the instructor. Future research could

survey students and instructors about what behaviors create that closeness and the behaviors identified in those surveys.

5.3.7 How can online language learning be enhanced for different populations?

As mentioned earlier there were a variety of participants in the study including traditional full-time students who do not work (such as participant #3), full-time workers who travel frequently (such as participant #1) and everything in between. Future research could investigate through in depth interviews what features are most important to the different populations of students. Such information could be used to better individualize instruction to meet the individual needs and learning goals of the students.

5.3.8 How do learners decide what is "proper" language that can be used as a model?

As noted, many of the participants used fellow classmates as examples of correct language usage. They also did not distinguish between non-native speaking instructors and native speaking talent on the video clips. This could be problematic, since novice language learners are perhaps the least qualified to make that kind of decision. The temptation to assume that someone of a higher proficiency level is always right appears to be a strong one. A written survey could yield some initial clues as to how learners make this decision. Individual interviews as well as a focus group discussion could then provide more detailed information that could then be used to "train" learners how to recognize good language models.

5.4 SUMMARY

In order to summarize the results of this study it is important to return to the three primary questions. Each question is framed by the interactions available in this online environment. They can be listed as the following eight assignments and activities: 1)

announcements, 2) **tutorials**, 3) **práctica**, 4) other Blackboard assessments (**hablemos**, **escuchemos**, **video**, **leamos**), 5) **chat**, 6) **cultura**, 7) forum postings (**questions**, **reflections**, **workbook postings**) and 8) email. In this section the answers to the three primary questions will be explored in the context of those interactions.

5.4.1 Effective available interactions

The study participants reported most of the eight interactions to be effective learning tools. The study participants found the **announcements** were effective as reminders and tips that helped many of them keep on track in the course. They also reported that the **tutorials** were highly effective because they were different from explanations in the textbook, and students could choose which ones they needed. The ability to print them out also contributed to their effectiveness. The study participants also reported that the **práctica** assignments were quite effective. They viewed it as practice, one of the categories identified by Pusack and Otto (1984) and later described in detail by Pusack (1987). They thought this IRF (initiation-response-feedback) model discussed by Ellis (1984) was valuable as long as the feedback was of an explanatory nature so they could understand their errors and how to correct them. This explanatory and timely feedback created a feeling of social presence and contributed the learners' perception of being close to their instructor.

The study participants considered the other Blackboard assignments as an opportunity to practice communicating reading and listening skills (**leamos**, **escuchemos**, **video**) or speaking skills (**hablemos**). They all confirmed that having examples of what they perceived to be "proper" Spanish was very effective. Some participants reported comparing what they read or heard from these sections to how they would have done it. Even with the speaking practice, there were those participants who listened to others and compared those messages to the way they would have tried to say the same thing. In

contrast to that, when the opportunity to practice a combination of listening and speaking in the **chat** format, the study participants reported the primary obstacle to the effectiveness of this assignment to be the frustration experienced in trying to arrange a meeting time with a partner who then actually showed up to complete the assignment at the agreed time. When they were actually successful in completing a **chat,** they preferred to work with someone with language ability similar to their own. For at least two of the participants there was also an issue with the level of their partner. One experienced great anxiety working with someone she considered fluent, and another implied that she experienced some discomfort from not being sure how to work with someone on a much lower level of proficiency than herself.

The **cultura** assignment was only really considered an interaction by those study participants who read what their classmates had posted. Few participants described this as effective, and those who did comment positively on it described it as interesting. Many students failed to see a connection between the **cultura** and their learning objectives for the course. Those with the time, enjoyed reading what others posted for these assignments when those messages were thoughtful and more than just the bare minimum to receive credit. The effectiveness of these interactions and in some cases whether or not the study participants even considered them to be interactions is still in doubt. In fact, the instructors all reported anecdotally that students consistently scored worse on test sections about culture than on other sections.

The forum postings were an effective resource that allowed learners to engage in "witness learning" described by Bento and Schuster (2003) in order to get examples on how an assignment should be done when the instructions were unclear. The archived nature of the **questions** forum were also perceived as very effective in getting specific questions answered quickly. One of the attributes that made these forums effective was

that they provided information on demand and often saved the study participants the time of emailing. Some of the study participants also reported that they used these forums (**questions**, **reflections**, **workbook postings**) to "get to know" what their classmates were like and to help out with either answers to questions or just commiserate with them. For those questions unanswered in the forums the study participants stated that the quick response of the instructor was very effective for resolving questions about the language, the course structure or the assignments.

5.4.2 Purposes working together

A picture does emerge as to how the different purposes the students perceived for the interactions worked together based upon how the study participants proceeded through each module. The first layer of interactions are those that help students understand the grammar points, assignments and course infrastructure as they entered the course through Blackboard. The **announcements** that they immediately encountered were messages of support either through reminders or grammar tips. From there, as they start a new module, the **tutorials** are available for added help with the different grammar points that can be accessed on an as needed basis, rather than requiring all students to pass through each tutorial before being able to do anything else.

The second layer of interactions provided practice with feedback that explained mistakes, examples of grammatically correct speech and reading text and opportunities to practice communicating. The order in which the study participants chose to engage in these interactions was a matter of personal preference. Some selected those they thought would be easiest to do first, others saved those assignments they disliked for last or got them out of the way first, and still others just followed the order in which they appeared on the assignment list. These included the **práctica**, **hablemos**, **escuchemos**, **video**, **leamos** and **chat**.

Finally, because of the archived forums and the ability to email the professor there was another layer of support for questions that arose after the students began posting their assignments. Since the announcements were also archived, those could be accessed again at any time as well. This help to understand the language as well as information about the course and the actual assignments, provided a way for students to access assistance as necessary. They might engage in those interactions in the middle of completing their assignments, towards the end of them or not at all.

So the overarching structure of the course as perceived by the learners was one that began with some help about the language, assignments and course as a warm-up going into the examples, practice and error correction. A final layer of on demand help in the form of archived messages (including previous announcements) and the email availability of the instructors provided any necessary assistance as they progressed through each module. In the literature from the four different fields, the purposes described seemed very distinct and compartmentalized. In some SLA theory, for example, they seem almost like a linear progression: receive input, develop and test hypotheses, refine hypotheses and retest. The study participants, however, appeared to view it as something more fluid, for example the line between explaining mistakes and helping someone to understand a grammar point is not necessarily well-defined. Likewise when a learner listens to an example of "proper" Spanish and starts comparing that to the way she would have said it, that could also be considered help to understand grammar points. What is clear from the study participants, is that in order to be successful they relied upon a combination of all these different interactions with purposes that complemented each other.

5.4.3 Interacting with whom or what

The impression left by the participants in this study was that interaction is seen as more of an interpersonal relationship and that rather than interacting with components such as the content and the interface, those are more of a medium for interactions with people. This possibility was raised by Gibby (2003) where a learner indicated her view that the content was essentially the distance learning equivalent of a meeting place. Tutorials, which would typically be considered an interaction with content, were perceived as more of message from the instructor. While Hillman, Willis and Gunawardena (1994) argued that the interface was more than a medium because it added an extra layer for the learners to deal with and raised the possibility of added frustration that could interfere with learning. The study participants, however, did not experience that and as such did not perceive that interaction. A couple did indicate that they were nervous or hesitant about the course before it actually began, but that went away quickly once they began working on the course. It is possible that the orientation, a tool suggested by Hillman, Willis and Gunawardena (1994) as a way to minimize the learner-interface interaction, may have contributed to learners not perceiving this interaction. Clearly. the study participants did not distinguish as many interaction components as indicated in the literature, but tended to focus on people as their interaction partners.

As mentioned in the discussion of how the purposes complemented each other, every time the students enter the course, the first interaction students have is through the announcements which would be an interaction with their instructor. The study participants perceived this as an interaction between the instructor and the whole class. Many indicated that they would briefly scan the announcements and decide if it was relevant to them or not, and that implies that they perceived that it was directed at the class as a group rather than as individuals.

The **tutorials**, particularly those with the shockwave animations, which the study participants viewed as an explanation from the instructor and the **práctica** assignments with their explanatory feedback were perceived as a one-to-one interaction between the instructor and each individual student. This was particularly notable, because these programmed materials required no time commitment from the instructor during the course freeing up his or her time to participate in other interactions such as responding to emails or messages posted in the different forums. The study participants also perceived those interactions as one-to-one opportunities with the instructor. In informal discussions among the four instructors, they describe the experience of teaching this online course to be more similar to tutoring than to teaching in a face-to-face classroom. The student perceptions of a one-to-one experience with their instructor may explain what the instructors were describing.

Other Blackboard assignments such as **escuchemos**, **video**, and **leamos** were perceived as interactions with someone who was viewed as an expert in the language. Whether or not the speaker or author was actually a native speaker did not seem to matter. Instructors were perceived to be as reliable as native speakers and vice versa. These interactions with a language expert were different from those with the instructor as they served as models or examples of grammatically correct speech or writing whereas interactions with the instructor were largely seen as explanatory.

A few assignments, such as **chat**, **hablemos** and many of the forum postings (**questions**, **reflections**, **cultura**, **workbook postings**) were perceived as interactions with other learners to a degree. **Chat** in particular was clearly an interaction between learners, while the others represented just opportunities for that interaction. Some of the study participants really sought this interaction by reading everything others had posted, posting their own responses and listening to all the other audio messages, but most only

did so occasionally. This may go back to Bento and Schuster's (2003) distinction between "active learners" and "witness learners." The latter exhibit a lot of interaction with the content, in this case merely reading the archived messages they think are relevent to them, while the former also participate in a lot of social interaction, in this case listening to or reading all messages and leaving some for others.

5.4.4 Recommendations

This common experience suggests that there are features that course designers and practices that instructors should incorporate in order to maximize the effectiveness of the interactions available in an online foreign language learning environment. From the course design point of view, these would include:

- **Non-linear instructional activities.** The study participants indicated that tutorials were used as the need for them arose. The ability to start assignments, leave them for additional instruction and then return was effective. Many of the study participants also printed the online materials, so they should be designed in a way that makes that option convenient.
- **Carefully designed chat opportunities.** Study participants who successfully engaged in chat described it as valuable, however, careful steps are necessary in order to reduce the amount of frustration that can be associated with these interactions. Matching learners of similar level would be one approach, although with a wide range of ability within a single class, that could prove difficult. Decreasing the number of required chats while increasing their value may get students to consider them relevant enough to their final grades to participate in a limited number. Creating opportunities to chat with native speakers who are not class members could make these assignments less threatening experiences. Those native speakers might also be more likely to engage in *foreigner talk* when they

are not concerned about meeting assignment requirements. Different instructions could be provided for pairings where one partner is at a significantly higher level in order to prompt the more advanced speaker into something like *foreigner talk* while at the same time encouraging the less proficient speaker to speed up despite the potential for mistakes.

- **Quality automatic feedback.** Course designers should take the time to provide feedback that anticipates the errors that learners are likely to make. It should explain why those mistakes are commonly made as well as how the correct response would be achieved. Those same explanations could be included in feedback for correct as well as incorrect answers and thus provide some extra reinforcement.
- **Carefully choose and support level appropriate reading and listening passages.** While students may come into the course at different levels, with the proper scaffolding, such as glossed vocabulary, information about the setting and visual cues should make the authentic language understandable. Without that kind of support, students of lesser ability may become frustrated and avoid those interactions.

Based on the data collected in this study, the instructor behaviors that enhance the effectiveness of interactions include:

- **Regular announcements.** Blackboard announcements can be entered at any time and programmed to appear on specific dates. Some announcements such as reminders can be easily set up to appear at the appropriate time. Other announcements, such as grammar tips, can be made based upon the needs of the students. Instructors should avoid repeating announcements whenever possible so they do not encourage students to ignore them. Answering "common questions"

can help create a social presence not only for the instructor, but for the class as a whole.

- **Connect interactions to learner goals.** With the automatic feedback in place, instructor time can be freed up to develop more one-on-one relationships with students. Inquiries into or surveys about what students hope to accomplish can be used to help them relate to the importance of the different interactions. There still may be times when student objectives run contrary to some of the interactions, but a knowledge of those goals puts the instructor in a better position to encourage full participation.
- **Maintain and organize archives for message boards.** Instructors should not delete old messages. If a discussion board becomes too cluttered, the solution would be to move previous messages into well organized archives. The study participants indicated that they relied heavily on those forums to answer questions in a timely fashion.
- **Keep response times as close to 24 hours or less as possible.** While no one would expect an instructor to be available 24 hours seven days a week, quick response to student messages will help keep them progressing in the course. Students should know when an instructor will be off-line as an unannounced disappearance may detract the social presence the instructor is striving to create.

Based on the results of this study, the above recommendations will enhance the effectiveness of the interactions that are available in an online foreign language learning environment.

APPENDIX A: interview protocol

Warm-up: Tell me a little about why you took Spanish and why you took this online course.

1. How often did you check for class announcements? How often were the announcements helpful to you? How did they help? What different kinds of announcements did you notice? If you ever asked a question that was later answered in an announcement, how effective an answer was it? How did those different kinds of announcements contribute to your efforts to learn Spanish? Which ones were the most helpful? Which ones did not help? In your opinion what kind of announcements could have been omitted?

2. How often did you post to the "Questions" forum? How often did you read what other people had posted? How often did you reply to someone else's message? What kind of messages did you notice there? How did using this forum contribute to learning Spanish?

3. What about the other forums where you signed up for interviews, indicated your test center preferences, arranged chats with other students? How did they affect your learning experience?

4. When you began work on a module, what was the first thing you did? How did you proceed through the module? Did you follow the same pattern through each module? In what order do you do the assignments and why?

5. When did you look at the tutorials? How much time did you spend on them? What did you do to get ready to study the tutorials? How did you study the tutorials? How did the objectives help you learn? How did the guiding questions help you learn? How did the preparation or actual content help you learn? How did the final questions in "A Step Ahead" help you learn? Not all the tutorials had shockwave movies; what kind of difference did they make for your learning when they were present? What about them helped you learn? Give me an example of one you thought was particularly helpful; why was it so effective? Give me an example of one you thought was NOT particularly helpful; why was it not effective? How did these tutorials contribute to your learning?

6. How did the **cultura** assignments contribute to your learning? How many different websites do you usually look at before posting your assignment? How often do you read and respond to someone else's posting?

7. How did posting the selected workbook pages contribute to your learning? How often did you read what other people post? How did the workbook activities in general contribute to your learning? How often did you check you answers?

8. How do you prepare for the **hablemos** assignment? How many messages do you listen to? What issues or problems did you have trying to record your own message? How often do you go back and listen to other messages after you have posted your own? How do these assignments contribute to your learning?

9. How are the **chat** assignments similar to the **hablemos** ones? How is it different? How do you prepare for the **chat** assignment? What issues or problems did you have trying to use the chat room? How many people are usually involved in your chats? How much does everyone involved in it participate? How does your proficiency in Spanish compare to that of your chat partners? How does having people with different Spanish abilities participate affect the chat and your learning? How do these assignments contribute to your learning?

10. How do you prepare for the **práctica** assignments? How many times do you save and come back? What do you do once you have submitted your answers for grading? Which **práctica** exercises helped you the most and why? Which ones didn't really help you and why? How do these assignments contribute to your learning?

11. How do you prepare for the **leamos** assignments? How many times do you save and come back? What do you do once you have submitted your answers for grading? What do you think about the reading passages? How much of them do you usually understand? How do these assignments contribute to your learning?

12. How do you prepare for the **escuchemos** assignments? What problems or issues did you have when trying to use the message player? How many times do you listen to them? How often do you save and come back? How much of the listening passages do you usually understand? How do these assignments contribute to your learning?

13. How do you prepare for the **video** assignments? What problems or issues did you have when trying to access the video? How many times do you watch them? How often do you save and come back? How much of the video do you usually understand? How do these assignments contribute to your learning?

14. How often do you go to the "pruebas de práctica"? When do you do them in respect to the other module assignments? How do these assignments contribute to your learning?

15. How often do you post reflections? Why do you post them? What kinds of things do you include in the reflection? How do your reflections contribute to your learning?

APPENDIX B: Background survey

What level of previous Internet experience best describes you before taking this class?

- Non-user: I've watched others use computers but never used them before.
- Novice: I use email a little and/or surf the web occasionally.
- Advanced: Email is an important communication medium for me, I often pay bills, make purchases or conduct other simple financial transaction on the Internet, I use the Internet to for research, I participate in online gaming and/or I have made a simple web page before.
- Expert: I have an Internet based business, I use the Internet for complex financial transactions (trading stocks, for example) and/or I create and maintain complex web sites.
- I fit between Novice and Advanced.
- I fit between Advanced and Expert.

What other kinds of computer experience have you had?

- Word processing
- Spreadsheet use
- Electronic presentations (i.e. Powerpoint)
- Database use
- Digital imaging
- Other _____

What kinds of classes with Internet use have you had before? How many?

- The class syllabus and perhaps other general information is online. (Web presence)
- The professor sends out information via email or has a site that is regularly updated with new information about the class and its materials. (Web-enhanced)
- The class spends as much time online as in the classroom. (Web-centric)
- The class is completely online or just has an orientation meeting. (Web course)

What kind of a computer(s) do you use for this course?

What operating system do you have?

- Windows 98 or earlier.
- Windows 2000
- Windows XP
- Mac OS 9 or earlier
- Mac OS X

What internet browser do you use?

- Internet Explorer
- Netscape
- Safari
- Firefox
- Other _____

What extra equipment did you purchase for this class?
- Speakers
- Microphone
- Sound card
- Other _____

Is there any extra equipment you needed and could not buy. If so, what was it and how do you get by without it?

What kind of Internet connection does the computer(s) you use for this class have?
- Dial-up
- DSL
- Cable modem
- Other high-speed connection _____

Describe any previous experience you have had learning, practicing or being exposed to Spanish. (For example: high school courses; time spent around native speakers in a foreign country; family members who speak Spanish, etc.)

What is your gender?

What is your age range?
- Younger than 25
- 25 - 34
- 35 - 44
- 45 - 54
- 55 or older

What is your yearly income range?
- Below $15,000
- $15,000 – $24,999
- $25,000 – $34,999
- $35,000 – $44,999
- $45,000 – $54,999
- $55,000 or more

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Vita

A. Scott Gibby was born in Provo, Utah on September 9, 1966, the son of A. Reed and Barbara Gibby. After graduating from Bartlett High School in Anchorage, Alaska, in 1984, he enrolled at Brigham Young University. He took a two-year hiatus in 1986 and 1987 to serve a mission in the Guayaquil Ecuador Mission of the Church of Jesus Christ of Latter-Day Saints. After his mission, he returned to Brigham Young University where he received a Bachelor of Arts in August 1991 and a Master of Arts in December 1993. Beginning in January 1994, he was employed as a distance education instructor of Spanish at Louisiana School for Math, Science and the Arts. He married Emma Jane Baldwin in May of 1995, and they have three children: Marcus, Jared and Cecilia. In 1998 he started teaching Spanish at St. Michael's Academy in Austin, Texas. In August 1999 he entered the Graduate School of the University of Texas. In 2001, he began teaching Spanish as a full-time faculty member at Austin Community College.

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